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### ABDOMINAL METHODS OF OBSTETRICAL DIAGNOSIS.<sup>1</sup>

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ABDOMINAL examination as a means of diagnosis during pregnancy and labour has been used for very many years, but during recent years its importance has increased and more especially since prenatal supervision has come to be recognized as the most important factor in the prevention of the various mechanical difficulties which may arise during parturition. The recognition of abnormality is of paramount importance, as once abnormality is detected, steps can be taken to rectify the condition if it is possible to do so. If the abnormality cannot be completely rectified, measures can be adopted to lessen its ill effects. In other words, if the labour cannot be converted into a normal one, the risks of an abnormal labour both to mother and child can be very appreciably lessened. For example, the risks of puerperal infection to the mother which is much greater in an abnormal labour, can be very considerably diminished by treatment in a hospital

where an aseptic technique is much more easily carried out than in a private house. The early recognition of an abnormality which cannot be corrected before labour, permits the practitioner to make use of manipulations or posture during labour, if necessary after consultation with a more experienced obstetrician and these may have a very appreciable effect in diminishing the risk to both mother and child.

#### METHODS OF ABDOMINAL EXAMINATION.

With the increased importance of abdominal examination more detail has been added to its various steps and it is especially in regard to some of these details that I wish to record the system of examination which I have gradually adopted as a result of many years' study of the subject.

In the system which I recommend, there are some original methods which I have discovered and described and the whole system differs materially from that usually included in obstetrical textbooks. Some of the details have been published previously, whilst others have not, although I have utilized them and given them in my lectures to students. One or two details are mentioned for the first time in this thesis.

I have found that by the use of the methods to be described later in detail that important points

<sup>1</sup> Accepted as a thesis for the degree of doctor of medicine.

in diagnosis can be detected much more quickly and with greater accuracy. The saving of time in diagnosis is a most important factor. It must be remembered that in obstetrics a great majority of labours encountered are normal ones and a method which quickly differentiates the normal from the abnormal, allows prenatal examinations to be carried out in a minimum of time. This is of great importance, especially when many patients have to be examined, for example at a prenatal clinic.

In the abnormal case greater detail is necessary than in a normal case, as there may be several distinct factors in the abnormality.

The methods of examination which I will consider for the purpose of this thesis, are two: inspection and palpation. The other methods of examination, mensuration, auscultation and radiography, will be considered but briefly if at all.

#### Inspection.

Inspection of the abdomen, especially in the late stage of pregnancy, often gives valuable information, as the shape and size of the abdomen varies according to the conditions and to the patient; it is not the same in a *primipara* with good abdominal and uterine musculature as in a *multi-para* with these muscles stretched and relaxed. Therefore inspection should always precede palpation and during palpation one should always keep watch on the outline of the uterus. When palpation is difficult, the visible projections of the abdominal wall caused by movements of the fœtus should immediately be palpated and the information gained will be of assistance in determining the lie, position and presentation.

As a rule it will be found that one side of the abdomen presents a more regularly curved appearance. On this side the abdomen projects forwards slightly more than it does on the other and on palpation the back of the fœtus will be found to be lying under this regularly curved projection. This, however, is not always the case as the placenta may be attached to the anterior uterine wall and cause a projection over the side where the limbs are.

Inspection of the abdomen will often help in the recognition of an oblique or transverse lie of the fœtus; when these lies are present, the projection in the epigastric area is absent or less pronounced.

Further when the uterus is larger than normal, inspection may be of assistance in determining whether the oversize is due to a large fœtus, to hydramnios or to multiple pregnancy.

When the enlargement is due to excessive size of the fœtus, the uterus tends to be increased more in length than in other directions and as a rule the regular curved projection on one side of the abdomen is seen, whereas in hydramnios this projection on one side is absent and although the uterus may be long, there is often in addition an increase in both the antero-posterior and transverse diameters of the uterus.

In multiple pregnancy the abdomen is usually much broader than in either of the above conditions; a large uterus in which the increase is more in the

transverse than in the vertical diameter, usually contains twins.

#### Palpation.

Palpation is to be considered under several headings:

(a) General palpation of the abdomen to diagnose (i.) an enlarged uterus or (ii.) any abnormal condition apart from or in connexion with the wall of the pregnant uterus or (iii.) the size and shape of the uterus.

(b) Detailed palpation has the object of discerning the contents of the uterus and the relations of the presenting part to the brim of the pelvis. This includes (i.) an estimation of the position of the fœtal back and whether the back can be traced up or across the fundus, that is whether the breech or the head is at the fundus; (ii.) the level of the anterior shoulder and its relation to the midline of the mother; the former indicates the amount of descent of the head into the pelvis and the latter assists in the determination of the position of the head. It also includes (iii.) the depth of resistance of the head on either side above the brim of the pelvis (this indicates the oblique diameter of the brim in which the head is lying), (iv.) the attitude of the fœtal head and (v.) the estimation of relative size of the head of the fœtus and of the brim of the pelvis.

#### General Palpation.

General palpation of the abdomen is a step which should always precede the detailed palpation of the contents of the uterus in patients seen for the first time.

#### Enlargement of the Uterus.

I shall not discuss the methods used in diagnosing an enlarged uterus as I have nothing to add to the symptoms and signs of pregnancy.

#### Abnormal Conditions.

The commonest abnormal conditions apart from the walls of the uterus are ovarian cysts. Inspection and palpation of the flanks will usually reveal them, unless they are lying in the pelvis. Therefore first of all the flanks should be palpated and then the accessible portions of the uterine wall. Fibromyomata are frequently detected and may be mistaken by the unwary for parts of the fœtus, but a myoma is a fixed projection which does not move its position; when the fingers are run across it, it is usually felt to form a watchglass shaped projection from the wall of the uterus. Myomata may, of course, be definitely pedunculated, but more commonly they project but slightly above the peritoneal surface of the uterus.

#### Size and Shape of the Uterus.

As mentioned under the heading inspection, the size and shape of the uterus are important points and palpation assists inspection very materially or rather I should say inspection assists palpation; mensuration by means of calipers or a tape measure at times is necessary, especially when the uterus is oversized or the pregnancy has gone beyond term.

When estimating the size of the uterus, the height of the fundus above the top of the symphysis, the greatest transverse diameter of the uterus and the girth at the level of the umbilicus should be estimated and to me the two former which should be measured with the calipers, are more important than the latter.

If the uterus is oversized, it is necessary to come to a decision as to the cause of the enlargement. I have mentioned under inspection the shape of the uterus in the case of an oversized foetus, in hydramnios and in multiple pregnancy; but I shall mention the other signs which help us to come to a correct diagnosis, although many of these signs will be detected during the latter part of the examination, when the contents of the uterus are palpated.

In the case of an oversized foetus the resistance is close up to the palpating hand and remains so; the contents of the uterus feel solid.

With hydramnios the resistance of the foetus is deeply situated as there is a considerable distance between the uterine wall and the body of the foetus. In some cases the resistance may be felt at one moment and it may be absent at the next; the uterus has a tense cystic feel.

Multiple pregnancy uncomplicated by hydramnios is diagnosed firstly by an oversized and especially a broad uterus, secondly by irregular findings on palpation and thirdly by auscultation of two distinct foetal heart sounds. The latter sign is, of course, absolutely diagnostic and the practitioner should listen for foetal heart sounds in all four quadrants of the abdomen whenever the uterus is oversized and when a single large foetus, occupying the whole of the cavity of the uterus, cannot be palpated.

Should hydramnios of such extent be present that palpation of the foetus is practically impossible, a skiagram may be of great assistance to the practitioner in coming to a decision as to the correct treatment to be adopted. A case such as the following may be taken as an example. An elderly woman without children, with a slight degree of pelvic contraction has such excess of *liquor amnii* that the foetal parts cannot be properly distinguished. An X ray examination may reveal: firstly, a single large foetus in which case a Caesarean section would probably be indicated; secondly, small single or twin foetuses which could easily be delivered *per vias naturales* or thirdly a deformed infant such as an anencephalic monster which might need an operative delivery by the natural passages.

I have seen several Caesarean sections performed in cases of hydramnios and the single foetus was of the anencephalic variety. Careful palpation and if necessary X ray examination will prevent such untoward happenings.

The shape of the uterus is of importance; when the hands are placed at the sides of the uterus and the fundus is mapped out, the shape of the uterus will often indicate whether the lie of the child is longitudinal, oblique or transverse.

#### Detailed Palpation of the Uterine Contents.

It is in connexion with this part of the examination that I wish to bring forward a method which differs considerably from that which is usually described in textbooks of obstetrics. This consists of several steps or manœuvres. I prefer to depart from the usual description; I do not call the manœuvres "grips" as the word "grip" conveys a wrong impression of the manipulations necessary to gain information.

Although from the description the impression may be gained that the method is a long one, when the essential points have been grasped, a complete and correct diagnosis can be made by its means in a very short space of time, especially in the normal left occipito-anterior presentation which is estimated to occur in 70% of all cases.

I should like to lay stress on the point that in the greater part of the examination no attempt should be made to feel a large part of the foetal surface at once. The resistance of a part, such as the back of the foetus, should be mapped out in the following way. The palpating hand lies comfortably over the curved uterine wall; by a sharp slight movement of flexion of the four fingers simultaneously the palmar surfaces of the tips of the fingers depress the abdominal and uterine walls, displace the underlying *liquor amnii* and meet with the resistance of the foetus. Once a resistance is felt by the fingers, its extent is mapped out by moving the hand a short distance and by repeated dipping movements of the fingers. It is noted whether the resistance is continuous or not and where the resistance ceases to be felt; by tracing the resistance in two directions at right angles to one another its extent can be determined and from this the part of the foetus that is being palpated can be ascertained.

In order to explain the rationale of the method permit me to state that in the great majority of cases the most easily recognizable feature of the foetus is the broad, continuous, convex resistance which corresponds to the back and as the back lies under the left anterior portion of the uterus in 70% of cases, one should feel for resistance first of all over this area.

#### The First Step.

The examiner sits or stands by the patient's right side and faces her; his hands are placed comfortably one on either side of the uterus, the tips of the fingers about or just above the level of the umbilicus. The left hand is kept still or may press the foetal body gently toward the right hand (see Figure I.). The right hand by dipping movements of the fingers endeavours to elicit the sensation of meeting with the resistance of a foetal part. Once resistance is felt in this area, it is traced upwards (see Figure II.). If it is the back that is felt, it should be traced upwards by moving the hand a short distance. The fingers then dip in again until the resistance is felt; by continuing the dipping movements the right hand traces the continuous convex resistance up to and maybe across the fundus. The resistance of the back can be traced



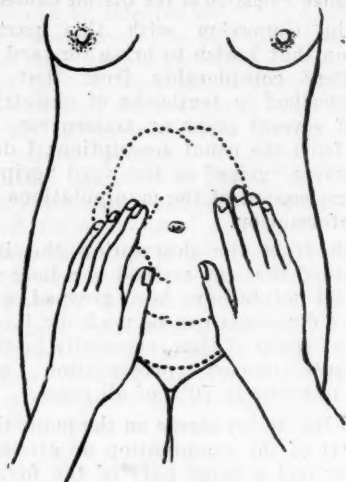


FIGURE I.

Diagram illustrating the first step in the detailed examination. Hands laid on the abdominal walls, tips of fingers at level of umbilicus. In left occipito-anterior positions the right hand meets with more resistance.

backwards towards the loin and in occipito-anterior cases it can be traced forwards almost as far as the middle line at the level of the umbilicus before it becomes more deeply situated.

At this stage the ventral surface of the foetus can be verified by a mapping out of the resistances of the upper arm and thigh as they converge towards one another and form what De Lee calls the fetal triangle, the base of the triangle being formed by the side of the fetal chest. This so-called fetal triangle usually surrounds the umbilicus. When the broad, continuous, convex resistance of the back is felt beneath the anterior portion of the left side of the uterus and its uninterrupted extension is traced to or across the fundus, the examiner concludes that the breech is at the fundus. The left hand lying over the right side of the uterus will often feel irregular projections produced by pushing movements of the foetal limbs and thus add to the signs which assist the diagnosis.

The main sign in this step, however, is the broad convex resistance of the back coming well up to the middle line of the mother and its continuation upwards. This is sufficient to diagnose a left occipito-anterior position of the vertex. In a face presentation the back is not convex and is not pushed to one side of the uterus. When the back is not felt in its normal left anterior position, it must be sought for elsewhere and as the right posterior position of the vertex is the next in order of frequency, the resistance should be felt for with the left hand by dipping movements at the level of the umbilicus towards the flank.

The resistance of the back in occipito-posterior positions is not nearly such a prominent feature as it is in anterior positions and it cannot be traced as far forwards towards the middle line. In such cases the irregular resistance of the limbs is usually more prominent and more to the front than in occipito-anterior positions.

When the resistance of the back has been mapped out and this usually takes a very short space of time, a fairly good estimate of the presentation and position can be formed. An examination of the contents of the lower part of the uterus should then be made. The detailed palpation of the lower part of the uterus will give important information. At this stage the examiner can determine whether the head is movable above the brim of the pelvis by using Pawlik's grip. Personally I rarely utilize this procedure, as I prefer to continue as follows.

#### *The Second Step.*

In the second step, that of the palpation of the anterior shoulder, the examiner turns and faces the patient's feet and continues to face the patient's feet till the examination is over. He places the corresponding hand over the back of the child, the palmar surface of the hand fitting over the curve of the back. By dipping movements the fingers trace the resistance of the back downwards till they reach the groove of the neck, where the resistance, if it can be felt at all, is deeply situated. The fingers are then bent into the groove of the neck (see Figure III.) and palpate upwards till the fingers come against a resistance. This resistance will be the top of the anterior shoulder. Its most prominent part should be mapped out. The index finger applied to this part indicates (i.) the level of this point above the symphysis and (ii.) its relation to the middle line of the mother's abdomen. I have found that the determination of the height of the anterior shoulder above the symphysis is the easiest method of finding out whether the head has descended at all through the brim of the pelvis and if so to what extent. The commonest distance between the top of the shoulder and the symphysis before engagement is about ten centimetres (four inches) (see Figure IV.). Under such circumstances a small part of the convexity of the head is found below the level of the brim of the pelvis. If the head is

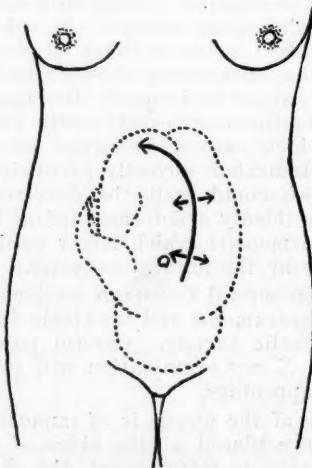


FIGURE II.

Diagram illustrating the first step. The arrows indicate the directions in which the examiner palpates in order to map out the broad, continuous convex resistance of the foetal back.



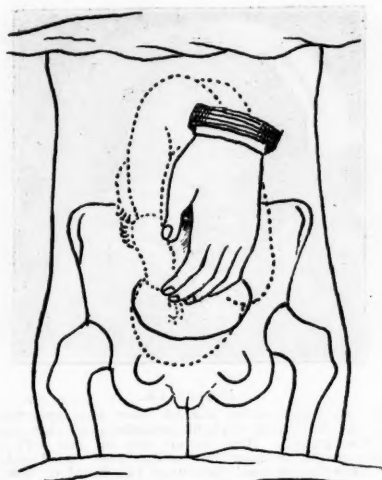


FIGURE III.

Diagram illustrating the second step. The left hand placed over the fetal back, palpating the anterior shoulder in left occipito-anterior position after engagement of the head.

lying still higher in the abdomen and if there is an interval between the head and the brim, the shoulder is about twelve and a half centimetres (five inches) above the top of the symphysis (see Figure V.). With full engagement of the head, that is with the greatest transverse diameter of the head engaged in the brim, the shoulder is felt about five centimetres (two inches) above the top of the symphysis (see Figure VI.). During labour as the head descends through the pelvis, the shoulder will be noted to descend further towards the symphysis and as the shoulder comes down to the level of the symphysis, the head will be commencing to distend the perineum (see Figures VII. and VIII.).

The distances given above are, of course, only average ones; with varying size of infants there will of necessity be a difference in the distances. When the fetus is oversized, the distance will be greater than when it is undersized or premature.

The relation of the shoulder to the middle line of the mother's abdomen is also an important point. With an occipito-anterior position the top of the



FIGURE IV.

Photograph of the right hand palpating shoulder in the right occipito-anterior position. The head has not engaged.

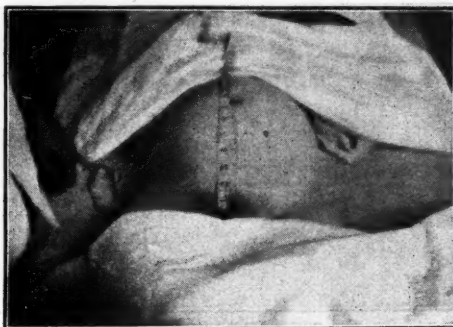


FIGURE V.

Photograph of the abdomen when the head is lying in the left occipito-transverse, almost left occipito-posterior position. The head is floating above the brim. The level of the shoulder is 12.5 centimetres (five inches) above the top of the symphysis.

shoulder will be felt close to the middle line, most commonly just under twelve millimetres (half an inch) from it, on the same side as the back of the fetus (see Figures IV., VI. and VII.). In textbooks the shoulder is usually illustrated just to the opposite side of the middle line, but to palpation it seems to be more commonly felt on the same side as the fetal back. It is possible that my placing of the anterior shoulder so frequently on the same side as the back is due to the fact that I localize it by palpating downwards along the resistance of the back.

When there is an occipito-posterior position, the shoulder is felt further out towards the side upon which the back is lying, usually about seven and a half centimetres (three inches) from the middle line of the mother (see Figures IX., X. and XI.). Under certain circumstances it may be impossible to feel it. The distance from the middle line of the mother's abdomen varies according to whether the occiput is directed either directly to one or other side of the pelvis or obliquely backwards to either

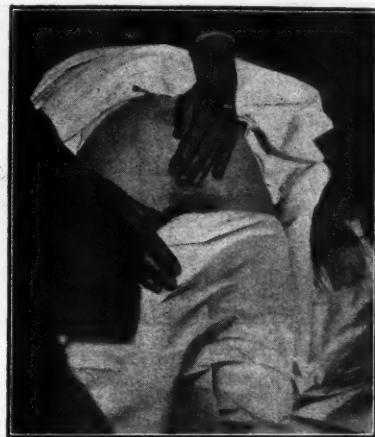


FIGURE VI.

Photograph of the left hand palpating anterior shoulder in the left occipito-anterior position. The head is engaged. The right thumb nail indicates the top of the symphysis.



FIGURE VII.

Photograph showing successive markings of the level of the anterior shoulder during labour. The head was in the left occipito-transverse position at the commencement of labour. The thin black line indicates the level of the top of the symphysis.

side. I find that in a large proportion of women before engagement of the head the antero-posterior diameter of the foetal head lies transversely to the brim of the pelvis and this seems to be more frequent if the occiput is directed towards the right.

With the head lying transversely the shoulder does not lie so far from the middle line as it does when the occiput is directed obliquely posterior (see Figures V. and VII.).

During labour the direction of rotation of the occiput in the pelvis can be detected by noting the relation of the shoulder to the middle line of the mother's abdomen. This is of great importance in occipito-posterior positions. If anterior rotation occurs, as it does in the great majority of cases, the anterior shoulder will be felt to come forwards towards the middle line as it descends towards the symphysis. In some instances the shoulder comes forward gradually with descent; in others the rotation forwards does not occur till the shoulder has descended almost to the level of the symphysis (see Figures VII., VIII. and XII.).



FIGURE VIII.

Photograph showing the successive markings of the level of the anterior shoulder during labour. The head was in the right occipito-anterior position at the commencement. The narrow black marking indicates the top of the symphysis. The highest black spot was applied before labour commenced. The second spot was applied ten hours after the commencement of labour. The third spot was applied eleven hours and the fourth spot eleven and three-quarter hours after the commencement. The foetus was born twenty minutes after the fourth spot had been applied.

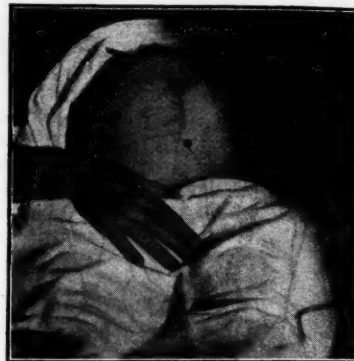


FIGURE IX.

Photograph showing spots placed over the anterior shoulder. The upper one indicates a right occipito-posterior position with the head disengaged. The lower one on the left indicates a left occipito-anterior position with the head almost fully engaged. The thumb nail indicates the level of the top of the symphysis. Bulst's method of rectification had been used for six hours between the two examinations. The patient was not in labour.

#### The Third Step.

In the third step the examiner is still facing the patient's feet. He can verify his diagnosis of the position of the head in the following way. The index fingers are placed one on either side of the middle line, about three and three-quarter centimetres (one and a half inches) from the middle line and two and a half centimetres (an inch) above the level of the symphysis. They are then pressed backwards till they meet with the resistance of the head. Do not press too firmly on a floating head or its position may be altered. One finger may meet with the resistance of the head sooner than the other. The fingers should be allowed to rest on the resistance of the head; the deeper finger will indicate the oblique diameter of the pelvis in which the head is lying; for example, if the right finger finds resistance on the right side of the pelvis, the head will be lying in the right oblique diameter of the brim (see Figures XIII. and XIV.).

Frequently when the head is floating above the brim, the fingers will meet with resistance at the



FIGURE X.

Photograph illustrating the left hand palpating the anterior shoulder in a left occipito-posterior position. The head had not engaged.

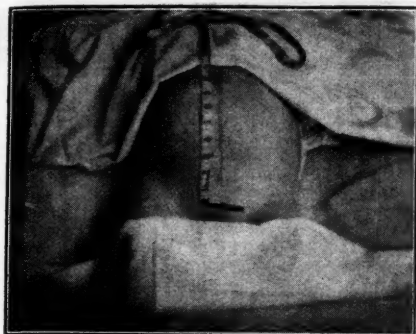


FIGURE XI.

Photograph showing the marking of the shoulder in a right occipito-posterior position. Almost full engagement of the head has taken place.

same depth on either side. This shows that the head is lying transversely, but when the head descends into the brim, it usually lies in one or other oblique diameter of the brim and the depth of the resistances alters accordingly.

This method of examination is of no use when the head is fully engaged, as the occiput has descended too deeply into the pelvis. This manoeuvre is of assistance in determining in which occipito-posterior position the head is lying when the findings from palpation in the upper parts of the uterus have been indefinite, for example when it has not been possible to map out the back of the child. Under such circumstances it may be that the head is lying in the right oblique diameter of the brim of the pelvis, which indicates either a left occipito-anterior or a right occipito-posterior. If there is no sign of the back in the left occipito-anterior position, it must be to the right and posterior and further careful palpation will usually discover it far out in the right flank.

In cases such as the above the necessary information may also be gained by palpation of the

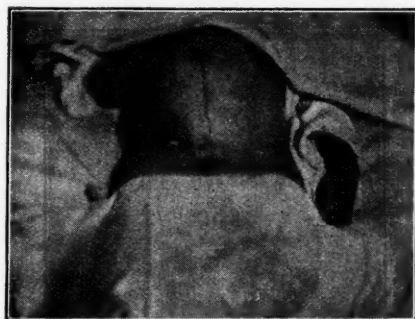


FIGURE XII.

Photograph showing successive markings of the anterior shoulder. The head was in the right occipito-posterior position at the commencement of labour. The spots indicate anterior rotation during the descent of the head through the pelvis. Labour began at 2 a.m. on February 2, 1926. The highest spot was applied at 11 a.m.; the head had engaged partly. The second spot was applied at 8.30 p.m., when the cervix was dilated to admit the passage of two fingers. The third spot was applied at 10.30 p.m. The fourth spot was applied at 4.15 a.m. on February 3, 1926; the membranes had ruptured. The fifth spot was applied at 4.50 a.m. At that time the head was palpable through the perineum. The fetus was born at 5.10 a.m.



FIGURE XIII.

Diagram illustrating the third step. The fingers ascertain the oblique diameter of the pelvis in which the fetal head lies. Here the deeper resistance on the right shows that the head is lying in the right oblique diameter.

occiput and the face, the face forming a larger and more anterior projection than the occiput and the resistance of the face can be traced higher up than that of the occiput.

#### *The Fourth Step.*

The fourth step is undertaken to estimate the degree of flexion of the head. This is determined as follows.

The hands are placed one on either side of the head as it lies over or in the brim of the pelvis. With the tips of the fingers pointing downwards towards the brim of the pelvis, deep dipping movements are made on to the resistance of the head about six and a quarter centimetres (two to two and a half inches) from the middle line of the mother's abdomen in order to palpate as far as possible the lateral aspects of the face and the occiput. The resistance should be traced upwards first of all on the side corresponding to the back of the fetus, that is the occiput should be mapped out and the level at which it is felt to pass into the neck, is noted, the fingers being kept at that level; the other

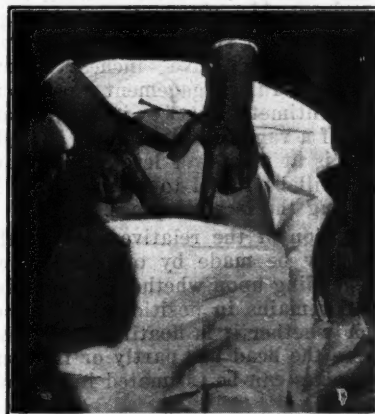


FIGURE XIV.

Photograph to show the diagnosis of the position of the head. The right forefinger sinks in deeper than the left. The head lies in the right oblique diameter of the brim.



hand then maps out the face and the resistance is traced upwards as far as the chin. The degree of flexion can be estimated by comparing the levels of the hands; usually before labour has set in there is a difference of two and a half centimetres (an inch) between the levels of the two hands, whereas when labour commences and full flexion of the head occurs, the difference is about three and three-quarter centimetres (one inch and a half). When the head is palpated, it is noted that the face forms a much larger projection than the occiput (see Figure XV.). It may be enunciated that when the back is anterior and there is a well marked convexity, the head will be flexed, but when the back is posterior, there may be an undoing of flexion and the level of the chin will approach that of the occiput. In occipito-posterior positions of the occiput this undoing of flexion is most probably due to the fact that the occiput is held up posteriorly, as the wider biparietal diameter of the fetal head cannot readily enter the narrow sacro-cotyloid diameter of the brim. Moreover, in occipito-posterior positions the back of the foetus tends to be straightened and the head tends to extend.

This slight extension of the head above the brim of the pelvis is one of the causes of what I will describe later as "apparent overlapping" of the brim. This condition is often noted when the occiput occupies a posterior position.

#### *The Fifth Step.*

The fifth step comprises the estimation of the relative sizes of the head and the brim of the pelvis. This is a most important part of the examination when the head has not descended into the pelvis to such an extent that its greatest transverse diameter is engaged in the brim. I estimate the degree of descent by means of the level of the anterior shoulder as described previously.

The foetal head may be altogether above the brim of the pelvis. In some cases an interval of about two and a half centimetres (an inch) may be felt between the head and the top of the symphysis or the head may occupy any level between that point and full engagement. When there is a high floating head the anterior shoulder is about twelve and a half centimetres (five inches) above the symphysis; with full engagement the shoulder is about five centimetres (two inches) above the symphysis. If a vaginal examination is made when the shoulder is at the lower level, the leading part of the head will be found to be about the level of the line joining the ischial spines.

The estimation of the relative sizes of the head and pelvis may be made by one of two external methods depending upon whether the head is partly engaged and remains in position during the manipulations or whether it is floating freely above the brim. Where the head has partly or fully engaged, the relative sizes can be estimated in the following way.

The front and top of the symphysis are mapped out by the tips of the fingers; the two hands are then placed close together over the lower part of the



FIGURE XV.

Photograph to illustrate the method of palpation of the levels of the chin and occiput in left occipito-posterior positions before engagement of the head. In this case the head was not fully flexed and the chin was only about 2.5 centimetres (an inch) above the level of the occiput.

abdomen (see Figure XVI.), the fingers are kept in a position of full extension with the tips of the fingers about two and a half centimetres (one inch) above the symphysis; the hands are pressed backwards on to the resistance of the foetal head and are kept applied to it whilst they slide downwards and backwards parallel to the axis of the brim; the size of the foetal head and that of the pelvic brim are estimated as indicated by the four diagrams which are described later on.

When the head is floating, it is best to proceed in the following manner. The head is grasped by the left hand which presses the head downwards and backwards into the brim of the pelvis as far as possible without causing too much discomfort to the patient; the hand steadies the head in this position (see Figure XVII.). It may be advisable to press the head in the direction of the brim of the pelvis with both hands and to hold it in position with the left hand or fundal pressure by an assistant's hand may be of service.



FIGURE XVI.

Photograph to show the first method of estimating the relative size of the head and the brim. The two hands are pressed on to the resistance of the head and slide down and feel if there is overlapping of the top of the symphysis.

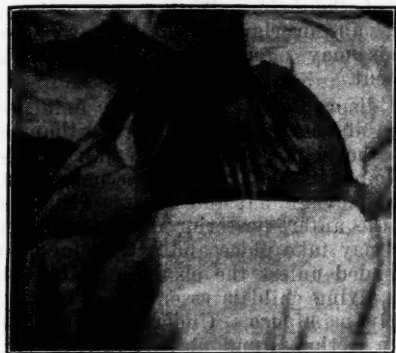


FIGURE XVII.

Photograph to show the second method of estimating the relative size of the head and the brim. The left hand attempts to push the head into the pelvic brim and steadies it, whilst the right hand estimates the relative sizes.

The right hand then is passed centrally over the lower part of the abdomen with the fingers pointing downwards. The fingers first of all palpate accurately the front and top of the symphysis; then they are placed higher up and pressed downwards on to the head almost three and three-quarter centimetres (one and a half inches) above the level of the symphysis. The fingers are kept extended and applied to the foetal head and they are pushed downwards in a direction parallel to the axis of the brim of the pelvis.

I wish to emphasize the fact that the fingers are to be kept extended. If they are flexed or semiflexed they tend to slide down and to follow the curve of the foetal head and thus to displace the head upwards. In the second place they do not keep in line with the most forwardly projecting part of the foetal head and may thus give rise to an underestimation of the degree of disproportion.

The relative sizes of the head and the brim may be best illustrated by means of the following four diagrams. In the first diagram (see Figure XVIII.) in which there is ample room for the head in the pelvis, the fingers slide down behind the symphysis.

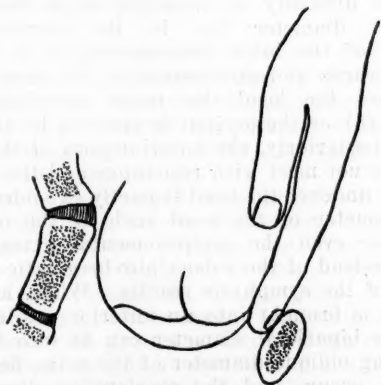


FIGURE XVIII.

Diagram to illustrate the head engaged with plenty of room in the brim.

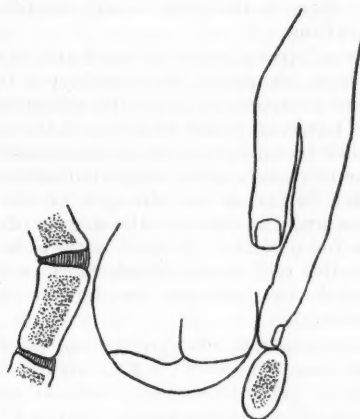


FIGURE XIX.

Diagram to illustrate the head engaged; tight fit.

With the head engaged in the brim the fingers can often be inserted between the head and the back of the symphysis.

In the second diagram (see Figure XIX.) the fingers cannot slide down the back of the symphysis unless the head is displaced upwards into the abdomen; there is as it were a tight fit between the head and the brim. In this type of case if the head is engaged, it will be found to be impossible to insinuate the fingers between the head and back of the symphysis.

In the third diagram (see Figure XX.) the tips of the fingers as they slide down impinge on the top of the symphysis. There is therefore some degree of disproportion between the head and the brim. The amount of disproportion varies, of course, in different cases and is best described in terms of overlapping of the top of the symphysis; for example, the head may overlap less than half way, half way or more than half way across the top of the symphysis.

In the fourth diagram (see Figure XXI.) the fingers are seen to slide down over the front of the



FIGURE XX.

Diagram to illustrate a slight disproportion between the foetal head and the pelvic brim. The tips of the fingers impinge on the top of the symphysis.

symphysis; there is therefore a very definite degree of disproportion.

After the relative size of the head and that of the brim have been estimated, the examiner is in a position to offer a prognosis as to the probable course of labour. I am compelled to say probable, as there are two other factors to be taken into consideration and neither of these can be estimated before a trial labour. One factor is the strength of the uterine contractions and the other is the degree of ossification of the foetal skull. A skull with wide sutures and fontanelles will mould much more easily than one in which the sutures are narrow and the fontanelles small.

Of course when there is ample room for the head in the brim (see Figure XVIII.), labour should be normal unless pelvimetry has disclosed some contraction lower down in the pelvis. If the fit is tight and labour comes on shortly, it should be normal, but if there is a tight fit and the pregnancy has gone beyond term, the practitioner should not delay long before inducing labour, since the hardness of the foetal head or the increased bulk of its body may cause difficulty during labour. This fact is of special importance if palpation of the upper part of the uterus indicates the presence of an oversized foetus. With a moderate degree of overlapping, that is when the head projects forward half way across the top of the symphysis, labour is usually terminated *per vias naturales*, but with delay owing to the amount of moulding necessary to allow the head to descend.

As a reason why this amount of disproportion is usually overcome, I may point out that the symphysis is about twelve and a half millimetres (half an inch) thick and that an ordinary foetal head will mould so that its biparietal diameter is reduced by six and a quarter millimetres (quarter of an inch). Further as the top of the symphysis is bevelled off on its posterior aspect to the extent of about six and a quarter millimetres (quarter of an inch), which represents the differences in length between the anatomical and the obstetrical conjugate diameter of the brim, the foetal head is more readily moulded if it fits into this bevelled off

portion of the brim. With a postmature foetus, however, an overlap of half way across the symphysis may offer an insuperable obstacle to engagement.

If the disproportion between the foetal head and the brim of the pelvis is so great that the head overlaps the brim by more than half the thickness of the symphysis, the prognosis becomes more grave. When the pelvis is flat and there is a slight diminution in the antero-posterior diameter of the brim, delivery may take place and a trial labour may be recommended unless the obstetric history is a bad one or a living child is essential as in the case of an elderly *primipara*. Under these circumstances Cæsarean section is undoubtedly the best treatment.

If the head overlaps the whole thickness of the symphysis and the fingers slide down over the front of the bone, Cæsarean section is indicated, unless the child is dead or the genital passages infected, when craniotomy is the safer operation.

#### Apparent Overlapping.

At this stage I shall mention what I have termed apparent overlapping which is frequently seen when the head is lying in either the right occipito-posterior or the left occipito-posterior position. By the term apparent overlap I mean one that is not real, the apparent disproportion being due to the abnormal position of the head or to partial extension of the head. The conditions when estimating the size of the brim and the foetal head in some occipito-posterior cases before engagement are at times misleading unless this apparent overlapping is remembered. On examination the head will be found to overlap the symphysis to a considerable extent. At times the head can be pressed as it were into the brim of the pelvis and the overlapping disappears. In other cases the overlapping is present until the body of the child rotates, so that the occiput comes to lie in an anterior position. This rotation of the child before engagement of the head and before labour commences can best be brought about by Buist's method of pads pinned to an abdominal binder.

The conditions which produce this apparent overlapping, are probably two in number: (a) The foetal head has difficulty in engaging when the wider biparietal diameter lies in the sacro-cotyloid diameter of the brim, consequently it is free to slide forwards and downwards on the brim of the pelvis and the head lies more anteriorly than normal; (b) as the occiput is arrested by the brim high up posteriorly, the anterior part of the foetal head does not meet with resistance and the normal flexion is undone; the head is partly extended and a large diameter of the head such as the occipito-frontal or even the occipito-mental attempts to engage instead of the suboccipito-bregmatic and an overlap of the symphysis results. When, however, the head is brought into an anterior position and the wider biparietal diameter can fit into the corresponding oblique diameter of the brim, flexion of the head occurs and the overlapping disappears. In such circumstances after rotation has been brought about by Buist's method before labour,

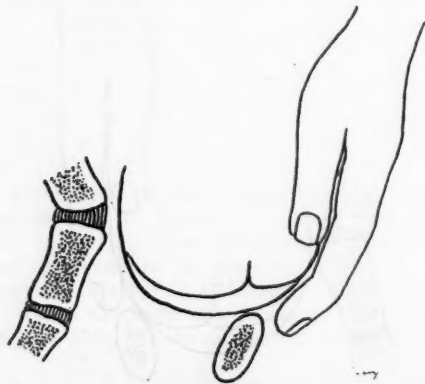


FIGURE XXI.

Diagram to illustrate a great disproportion between the size of the foetal head and the pelvic brim. The head completely overlaps the top of the symphysis.



engagement may occur almost immediately as is seen in Figure IX. Rotation from a right occipito-posterior to a left occipito-anterior position took place and the photograph showing the position and the level of the anterior shoulder in the right occipito-posterior and left occipito-anterior respectively was taken six hours after the pads and binder had been applied. The relative level of the two markings shows how the head has descended (see Figure IX.). This photograph emphasizes the importance of antenatal rectification of occipito-posterior positions.

If when the overlapping disappears, the head is pressed firmly downwards and backwards, it is probable, firstly, that there is but slight disproportion between the biparietal diameter of the fetal skull and the sacro-cotyloid diameter of the pelvis and the pressure overcomes the disproportion and, secondly, that the manipulations cause the head to flex and in consequence smaller diameters are presented at the brim.

The recognition of this reducible overlapping in occipito-posterior positions is most important as a correct diagnosis of the conditions may render unnecessary the performance of a Cæsarean section or a difficult forceps extraction, rectification of the occipito-posterior position being all that is necessary in order to overcome the apparent disproportion between the head and brim.

I have thus far described only the routine when the vertex is the presenting part. When the brow presents, flexion of the head is undone and the occiput and chin tend to lie at the same level. With a face presentation the curved resistance of the back is absent and the occiput forms a definite projection on the side opposite to the limbs. With a breech presentation the curved resistance of the back is not continuous up to the fundus and palpation reveals the head in the fundus and auscultation the heart sounds higher than normal. Deep palpation into the brim shows that the brim is usually empty before labour sets in. An oblique or transverse lie is easily recognized in the absence of hydramnios and the different parts of the fetus can be mapped out by palpating obliquely or transversely across the abdomen.

#### Advantages of the Method.

This completes the description of the system of examination and I propose to emphasize certain of its advantages. As far as possible I shall take the advantages in the order in which I have described the system.

Earlier in the thesis I have mentioned that the broad, continuous, convex resistance of the fetal back is the most easily recognizable feature of the fetus in the great majority of cases. Here I will add that the recognition of the parts occupying either end of the uterine cavity is made much more quickly and with greater certainty if the resistance of the back is sought at the level of the umbilicus and traced upwards and downwards.

For example, the resistance of the back felt at the level of the umbilicus, traced forwards up to the

middle line and ascertained to have a continuous curve up to or across the fundus, immediately indicates an anterior position of the occiput. The examiner can then turn, face the patient's feet and palpate downwards till the anterior shoulder is located; this indicates the amount of descent, if any, of the head into the pelvis.

If the anterior shoulder lies five centimetres (two inches) above the level of the symphysis, the greatest transverse diameter of the head is engaged in the brim and under such circumstances no further examination is necessary, providing, of course, that pelvimetry has shown a normal pelvic outlet. If, however, the level of the anterior shoulder indicates an incompletely engaged or a fully disengaged head, the examination detailed previously should be completed, that is the determination of the position of the head in relation to the quadrants of the pelvis, of the degree of flexion of the head and of the relative size of the fetal head and the brim of the pelvis. All these points are of importance when the head is disengaged, the last one being the most important, as the head is used as a pelvimeter; the two others may indicate the cause of any disproportion present and especially when the occiput is posterior, as I have pointed out when discussing the so-called apparent overlap.

The fact that the head is disengaged during the last three weeks of gestation in a *primipara* demands a careful estimation of the size of the passages and the passenger, as well as a diagnosis of the attitude and position of the head, whereas in a *multipara* with a history of normal labours, the passages are probably normal and apart from over-size of the fetus, attention should be mainly directed to the detection of abnormalities of the attitude and position of the head.

I can claim originality as to the observations in regard to the level of the anterior shoulder, as I have mentioned them in two earlier publications, the first time in THE MEDICAL JOURNAL OF AUSTRALIA of September 16, 1916, and the second time in the *Transactions of the Australasian Medical Congress*, 1920. This method, I contend, is a great advance on any previously described method of estimating the degree of descent of the head into the pelvis not only during the latter weeks of pregnancy, but also during labour. The advantages of the external method of estimating the descent of the head during labour over the internal methods, vaginal or rectal (see Figures VII., VIII. and XII.), are: (i.) That it is not distasteful to the patient, whilst the internal methods are, and (ii.) it is a more exact method, especially if the level is carefully marked at each examination. With the internal methods there is at times a difficulty in visualizing the level of the presenting part, especially when it is compared with the line joining the ischial spines. (iii.) It is absolutely safe and carries no risk to the patient, whilst the internal methods, however carefully carried out, always carry a risk of the introduction of sepsis. (iv.) There is with all internal examinations during labour the possible fallacy of mistaking an increasing caput for a descent of the presenting part.

The rotation of the shoulder forwards when the occiput was originally in the posterior position and anterior rotation of the occiput has occurred, is also an important advance on the previous method of estimating it through the vagina and it too is without risk to the patient. This observation is one that was originally described by me in *The Transactions of the Australasian Medical Congress*, 1920.

The method which I have described for estimating the relative size of the fetal head and the brim of the pelvis has not been previously published, although I have described it in several lectures delivered both to students and to medical men during the past year.

Of course, other somewhat similar methods have been described previously, but not in such detail as I have given nor can I remember having seen anywhere the method of using the top of the symphysis as an indicator of the degree of overlap, thereby arriving at a more accurate prognosis of the probability of a delivery *per vias naturales*. To my mind the external method of estimating the degree of disproportion has several advantages over the Munro Kerr method. The main one, of course, is that the external method of estimating disproportion can be employed at any time before or during labour and as often as one wishes without risk to the patient, whereas with Munro Kerr's method, used just before or during labour, there is the ever present risk of introducing infective material. Another advantage of the external method over Munro Kerr's method is that when the head cannot be pressed into the brim, the part of the head that the examiner wishes to compare with the brim, lies high up and it is almost out of reach of the thumb which is used to estimate the overlap in Munro Kerr's method. It is easily felt by the hand placed externally and the amount of forward projection over the symphysis is much more easily estimated.

In the presence of disproportion of a moderate degree when a trial labour has been decided upon, vaginal examination should be omitted if it is possible; in these circumstances the external methods of examination which I have described, are usually sufficient.

For example, the level of the anterior shoulder tells us whether the head is descending or not and the estimation of the degree of overlapping of the brim tells us whether the head is moulding into the brim; this generally suffices. If it is desired, however, to find out the degree of dilatation of the cervix, this can be estimated by rectal examination without risk to the patient.

My personal opinion is that the external method of estimating disproportion is much easier than Munro Kerr's method and the degree of disproportion can be more exactly diagnosed.

The apparent overlapping which is encountered at times when the occiput is posterior, is a condition which has not to my knowledge been described previously. It emphasizes the importance of the

antenatal correction of the abnormal position by Buist's pads and binder method. Rectification into an anterior position is followed in a great majority of cases by the disappearance of the apparent overlapping and the head engages without difficulty.

Of course, it is well recognized that at times during labour the head will not engage when it is lying in an occipito-posterior position and descent will not occur until the occiput is rotated to the anterior position. I have not yet heard of anyone who has detected the overlapping in these cases before labour and noted the disappearance after rectification. When the apparent overlapping has disappeared after rectification, labour has been normal.

Of course, there are cases in which this disproportion with the occiput posterior does not produce obstruction, but moulding may be necessary before the head engages and this causes delay during labour and if premature rupture of the membranes has occurred, the delay may be such as to cause danger to mother or child or to both.

It is in the unrecognized occipito-posterior case that the incorrect and ill-advised application of the forceps so frequently causes terrific trauma to the maternal soft parts and the fetal head.

#### Conclusions.

In conclusion permit me to state that:

1. There is in the method which I have described, a divergence from the usually described methods of examination and this method has numerous advantages, some of which are the result of my own observations.
2. The method enables the examiner to recognize very quickly the normal case which fortunately is the most common. It is thus a great time saver.
3. In the abnormal case it enables the examiner to ascertain the main facts with great ease and exactness.
4. In both the normal and the abnormal case the method tends to eliminate vaginal examinations altogether or greatly to diminish their number and with the more general adoption of such external methods of examination both before and during labour there will follow a diminution of the number of cases of puerperal sepsis which is in all parts of the world the cause of fully one-third of the deaths due to childbirth.

With the knowledge gained by these methods there will follow a reduction of the number of cases of trauma both to the mother and to the fetus during birth and in consequence there will be less maternal invalidity due to childbirth and more normal living infants.

I have to thank Dr. A. Q. O. Harrison, Senior Resident Medical Officer at the Royal Hospital for Women, for the care he has shown in taking the photographs for this thesis and for the trouble he has been put to in locating and applying spots to the anterior shoulder during labour.

FORCEPS.<sup>1</sup>

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THE first forceps of the modern type were invented in the latter part of the sixteenth century by Chamberlen, a Huguenot physician, who had fled to England. The secret was held in his family until early in the eighteenth century. The instrument was short and straight with a cephalic curve. The first important improvement on this was the lengthening of and the addition of a pelvic curve to the instrument by Leveret in the year 1747. No further notable improvement occurred until the year 1877, when Tarnier introduced the first workable type of axis-traction forceps. An earlier type of axis-traction forceps had the ends of the handles curved backwards over the perineum, but was found to be clumsy and inefficient. Tarnier conceived the idea of adding separate jointed traction handles to the blades and his forceps with only minor modifications in the design is the standard type in use today. In the British Empire the Milne Murray and the Neville Barnes are the modifications mostly used. On several points in the structure of this type of forceps which I shall henceforth refer to as the classical type, I particularly wish to lay stress.

(i.) The locking apparatus makes the forceps rigid, preventing any sliding of the blades the one on the other.

(ii.) There is a locking screw which firmly fixes the head in the blades during traction and is supposed to be released during the intervals between traction. This clearly indicates that there is a tendency for the blades to slip off the foetal head. A tremendous pressure can be applied to the tips of the blades by this screw, a point frequently overlooked by those inexperienced in the application of forceps and the child consequently suffers.

(iii.) The pelvic curve necessitates the application of the forceps with the blades more or less on the lateral wall of the pelvis and consequently their symmetrical application to the foetal head, except when it lies with the sagittal plane more or less in the antero-posterior diameter of the pelvis, is impossible. The consequences of an asymmetrical application of the forceps are: (a) Greater tendency to slip; (b) greater risk of damage to the child; (c) enlargement of the mass to be delivered through the parturient canal, owing to the projection of those parts of the blades, that do not accurately fit the head with consequent greater risk of damage to the mother. Moreover, in a transverse lie in a flat pelvis compression in the occipito-frontal diameter increases the transverse diameter of the foetal head and so increases the discrepancy between the passenger and the passages. Also when one blade is over the face and the other over the

occiput, the blades cannot be locked, unless extension of the foetal head is present or brought about, a very undesirable feature. The reason for this is that in flexion the occiput is lower than the face. A further disadvantage in high applications is the shape of the shanks of the forceps which lie apart and do not meet until they join the handles at the lock. Consequently if the forceps are applied symmetrically to the head at the superior strait, the posterior branch bridges over the anterior concavity of the sacrum and prevents the head from entering the pelvic cavity proper.

The liability of these forceps to slip is particularly noticeable in occipito-posterior presentations when the foetus is unrotated. I have heard of one practitioner who claimed that it was unnecessary to determine the position of a vertex case. If there was any delay, he applied forceps and if they slipped, he knew he was dealing with an occipito-posterior position.

The danger of the unskilled use of these forceps is illustrated by two cases which occurred in the same week at Queen Charlotte's Hospital, London.

The first patient arrived with the diagnosis of contracted pelvis and the practitioner had sent her in for a Cesarean section. He had made a number of unsuccessful attempts at delivery with forceps, as a severe tear extending well up the vagina testified. The baby was born naturally half an hour after admission.

The other patient was sent in with a similar history, a similar diagnosis and for a similar purpose. When the blankets were lifted off the mother, the babe was found lying between her legs. She also had a severe laceration. The first case was and the second probably was an occipito-posterior position.

One might criticize and say that this was bad midwifery. I agree. But, if the forceps had been efficient, such results would not have occurred, even in the hands of more or less unskilled obstetricians.

## The Kielland Forceps.

This brings me now to consider the latest type of obstetrical forceps, introduced by Kielland, of Oslo and first placed before the profession in 1915.

The Kielland forceps differ from the classical type in the following respects.

In shape they lack almost entirely a pelvic curve. The blades, according to Kielland's own description, are in relation to the rest of the forceps as a bayonet is to a gun, that is they are on a plane below that of the handles and shanks.

The lock consists of an L piece attached to one branch, forming a deep groove in which the other branch glides. This lock is placed half-way along the shank of one branch.

The shanks are longer than in the classical type and for the greater part of their length are straight and flat. The distal extremities are curved outwards to meet the blades and are rounded. The shanks lie in apposition for the greater part of their length.

The handles are attached to the lateral sides of the shanks and permit free sliding movement of the branches the one on the other.

The forceps are very lightly constructed.  
There is no fixing screw.

<sup>1</sup>Read at a meeting of the Section of Obstetrics and Gynaecology of the New South Wales Branch of the British Medical Association on March 17, 1926.



The internal surfaces of the blades are rounded and convex, resulting more or less in a cushion-like effect on the fetal skull, consequently causing less pressure and tendency to cut than the classical type.

On the handle of each branch is a small knob. This is placed on the opposite side to that in which the plane of the blade lies. The significance of this knob will be seen later, when we come to describe the method of application which Kielland has evolved for his forceps.

There are no special axis-traction handles. In spite of this they are still axis-traction forceps. When the forceps are correctly applied, the handles must point in the direction of the axis of the pelvis at the point to which the head has descended. Their only disadvantage in this regard is when they are applied to a high standing head. In this case there may be need for an episiotomy, so that the handles may lie sufficiently far back.

You will note that, in the description of these forceps, the branches have not been referred to as right or left, anterior or posterior. It is impossible to so describe them, for in the application of the forceps one disregards the pelvis entirely and considers only the position of the fetal head. These blades are always applied in the occipito-mental diameter in vertex cases and in the mento-occipital diameter, if one may so call it, in face presentations.

#### Method of Application of Kielland Forceps.

The following technique in the application of these forceps is that described by Kielland and is extracted from his original monograph.

The patient, being anesthetized and in the dorsal position, is examined and an absolutely correct determination of the level of the head, the direction of the sagittal suture and the position of the fontanelles is made. The branches are articulated and the forceps held in front of the external genitalia in the position they will occupy on the fetal head. The concave margins of the blades (indicated by the knobs on the handles previously mentioned) are held towards the leading point, the occiput in vertex presentations and the chin in face presentations. With the forceps held in this position, the upper or anterior branch is taken to be introduced first. The anterior branch must in all cases be the first to be introduced. The index and the middle fingers of the left hand are inserted into the vagina and behind the anterior margin of the cervix. The anterior branch of the forceps is held in the right hand with the cephalic concave surface directed upwards. Guided by the fingers of the left hand, it is gently pushed along the birth canal until it



The Kielland Forceps.

touches the head. It is then guided between the anterior cervical wall and the fetal head behind the *symphysis pubis*. It is allowed to glide gently upwards, as long as it will do so without resistance. When it has been introduced far enough, the shank should rest on the posterior vaginal wall. The obstetrician, withdrawing the left hand, has now to turn the branch of the forceps so that its concave cephalic surface is applied to the head. This is accomplished by gently rotating the branch and at the same time pushing it upwards. The rotation is made towards the concave margin of the blade which is indicated on the handle by the small knob. Rotation completed, the shank rests firmly on the perineum and the branch has no tendency to slip out. When the blade is correctly applied, the handle should be pointing downwards directly in the mid-line, if not, gentle manipulation will bring it into this position. The posterior branch is applied directly to the posterior surface of the head, guided as before by the middle and index fingers of the left hand, care being taken to introduce it on that side of the anterior branch on which locking is to take place. If the posterior branch does not glide in easily, it is probably due to the tip of the blade pressing against the pelvic wall or the head, owing to the handle being held too high or too low. By lowering or raising the handle the difficulty will be overcome. Force is never necessary and should not be used to overcome obstruction. If gentle manipulation does not overcome it, the blade should be withdrawn and the cause of the obstruction investigated. When the branches of the forceps have been articulated, the blades should lie symmetrically on the fetal head with the handles in the mid-line on the perineum. The operator now feels for the sagittal suture which should lie mid-way between and parallel to the blades of the forceps, except in the case of asynclitism, when it will lie nearer one blade than the other. In those cases in which the head enters the pelvic cavity asynclitic, it may be difficult to introduce one branch of the forceps as high as the other. Consequently the blades cannot be applied symmetrically. This does not matter, for the branches can still be easily articulated and as traction is made and the head descends, the lower branch can be made to slide upwards to its proper position.

When traction is applied with these forceps, it is applied in the direction in which the handles point.

As the head descends, spontaneous rotation usually occurs. The head can be rotated at will with these forceps, but it is rarely necessary. If the head does not rotate spontaneously, rotation should be performed in the widest part of the pelvis just above the level of the ischial spines. The sagittal suture is rotated into the antero-posterior diameter of the pelvis with the leading point to the front. Here again, the knobs on the handles of the forceps indicate the direction of the rotation. These knobs face towards the leading point and consequently are rotated anteriorly. When the forceps are used to rotate the head, traction should not be exerted

at the same time and the rotation is made in the axis of the handles.

As the head approaches the pelvic outlet, an operator who has been used to the classical forceps, is inclined to elevate the handles. If this is done, the blades will tend to slip on to the temporal region of the child's head and to come off. One should remember, therefore, only to exert traction in the direction in which the handles point, following the alteration in direction given to them, as the head descends in the birth canal and appears under the pubes.

#### General Considerations for the Application of Forceps.

Before forceps are applied, the following conditions should be fulfilled:

- (i.) The child must present correctly, that is either by the vertex or the face.
- (ii.) The birth canal should be of such a size as to permit the passage of the child without injury.
- (iii.) The os should be fully dilated.
- (iv.) The head should have entered the pelvis, that is its greatest diameter should have passed the brim.
- (v.) The membranes must be ruptured.
- (vi.) The bladder and rectum must be empty.
- (vii.) An anæsthetic should be administered.

When forceps are applied, traction should be gentle, force should never be used. Delivery should not be unduly hastened, as time must be allowed for the moulding of the head and the stretching of the maternal parts. Time should never count with the obstetrician. The busy practitioner sometimes uses forceps with the object of "getting the job over." This should never be. There are definite indications for the application of forceps and their use should be restricted to these.

#### Indications for the Use of Forceps.

A few years ago (March, 1921) there was a heated discussion in the correspondence columns of *The British Medical Journal* on the uses of forceps. Some advocated their use in all cases, others maintained that they were rarely necessary. One correspondent stated that in a wide experience covering several thousand cases he had only had occasion to apply forceps on three occasions. In the next issue someone replied, pitying the plight of these three mothers whose conditions were evidently difficult, in the hands of one so inexperienced in the application of forceps. Every procedure in this world of ours is subject to abuse or disuse, but there is always a happy mean and without doubt there is great benefit to be derived from forceps, when used with reason and skill.

In estimation of the probable progress of a labour three factors enter: the size of the child, the size of the pelvis and the strength of the uterine contractions. We can gauge the first and second, but we have no method of estimating the third before labour is in progress.

The two great indications for the application of forceps are threatened distress of the mother and threatened distress of the child. I wish particularly to stress the word "threatened," because most textbooks ignore it, giving as indications for forceps application "distress on the part of the mother or child." They then proceed to give a list of the symptoms of such distress. In practice the obstetrician should never see these conditions, but should forestall them. Unfortunately from the point of view of teaching the student, their anticipation can come only with experience. But even in their presence forceps should not be applied, unless the conditions previously mentioned are fulfilled. It is no use dragging a distressed child through passages too small for its accommodation. Forceps should not be applied to the floating head. If the head has not engaged, there is probably too much disproportion for delivery *per vias naturales* without damage to the child or mother.

The cervix is not fully dilated until the head has entered the brim and forceps should not be applied before this has occurred. If the disproportion between the head and the pelvis is not great, one may perform a pubiotomy and apply forceps after allowing time for the head to enter the brim. Forceps application to the after-coming head is entirely unnecessary. Although forceps are not intended for use on the breech, nevertheless they are often very useful when the fœtus has become impacted with the legs extended.

The function of forceps may be briefly stated thus: To complete delivery when the natural forces have failed to do so in a reasonable time, but before the mother or child have become distressed. The natural forces, however, must be sufficient to have overcome any obstruction.

#### The Advantages of the Kielland Type over the Classical Type of Forceps.

Every obstetrician knows that the delivery by forceps of a low, more or less completely rotated head is an easy operation with the classical forceps, but it is quite otherwise when the head is high and unrotated. In this case the head cannot be gripped in an ideal manner by the blades of the forceps. They grip not the sides, but more or less the front and back of the head and when traction is made, tend to maintain or increase the extension of the head on the body.

#### The Kielland forceps—

(i.) Can be applied symmetrically to the foetal head in all positions except in a parietal presentation and, fitting it accurately, are a distinct improvement over the older types, especially when the head is lying in a transverse or an oblique position.

(ii.) They can be applied to the asynclitic head in parietal presentations owing to their ability to be locked with the blades at different levels.

(iii.) They facilitate rotation of the head and thus are of special service in unrotated occipito-posterior positions. Being applied in the occipito-mental diameter with the plane of the handles more towards the leading point, they tend to advance the

leading point when traction is made and thus to increase the flexion of the head. Owing to their broad even grip they do the head no damage and, rotating within, not dragging the soft parts along with them, they do no damage to the maternal tissues. There is thus no need for manual rotation or for the double application of the forceps (Scanzoni's manœuvre), as when the classical type is used. Risk of trauma and infection are thus very much lessened. It has been shown in the recent investigations into puerperal morbidity that the danger is greater and the infection more severe, the more the maternal tissues have been traumatized.

(iv.) They can safely perform rotation. Rotation with the classical forceps is difficult owing to the pelvic curve and is a procedure not to be recommended.

(v.) They do not slip when once applied, unless the handles are pulled forwards. As before stated, traction should be made only in the direction in which the handles point.

(vi.) They can successfully deliver a patient, starting with the foetus in an occipito-posterior position, in which the head has become impacted in the transverse position between the ischial spines (low transverse arrest).

(vii.) They are of great advantage in face presentations, not only when the chin is anterior, but also when it is posterior. In the latter position the classical type is of little use. In this presentation, as in occipito-posterior presentations, they tend to advance the leading point and so cause it to rotate to the front.

For low application, Kielland forceps have no advantages over the classical type. In this case the first blade can be applied direct to the head, the one usually first applied being the left. In middle and high applications their advantages are so great that one has no hesitation in commending them. Once grasped, the technique of their application is simple, although the necessity of turning the first blade applied has been adversely criticized. No harm can occur as the result of this, unless there is tonic contraction of the uterus with threatening rupture. If this is present, no attempt should be made at application of forceps or delivery, until relaxation has been obtained by pushing the anaesthetic or even the administration of sedatives.

Kielland used his forceps on the floating head. This procedure may have been successful in his hands, but generally adopted, led to such awful results that his forceps were condemned and their definite advantages on the entered but unrotated head were overlooked.

In conclusion, although I consider that Kielland's forceps have advantages over the more classical types, the indications for their use extend no further. The extent of the use of forceps by individual obstetricians will naturally vary, but there is no doubt that with them one has an extremely valuable instrument to save life and relieve suffering.

## Reports of Cases.

### INFLUENZAL MENINGITIS WITH AN ADDED PNEUMOCOCCAL INFECTION.

By HILDA E. KINCAID, D.Sc., M.B., B.S. (Melbourne),  
Senior Resident Medical Officer, Renwick  
Hospital for Infants, Sydney.

THE following case of meningitis in a young baby is of interest. The condition began as an influenzal infection and was superseded by a pneumococcal infection, the original influenzal infection apparently dying out.

Baby R.T., aged four months, was admitted with a history of feverishness and a cough for five days. On admission the child was in fair condition. The temperature was 37.8° C. (100° F.), the pulse rate was 100 and the respiratory rate 44 in the minute. Nothing abnormal was detected in throat, heart, lungs or urine, the fontanelle was level. There was no stiffness or head retraction. The abdomen was slightly distended; there was no rigidity or tenderness. The day after admission the child had a convulsion during and after which the fontanelle remained normal, but the abdominal distension became pronounced and was relieved only with difficulty.

Two days later the fontanelle felt slightly tense and lumbar puncture was performed. About four cubic centimetres of turbid fluid were obtained, not under increased pressure. The fluid contained pus and a few Gram-negative bacilli which on culture proved to be influenza bacilli. No other organisms were present. Two days later lumbar puncture was again done, about fifteen cubic centimetres of very thick fluid was obtained under some increased pressure, the fluid contained numerous pus cells, a few pneumococci and a few influenzal bacilli. The next day lumbar puncture gave about ten cubic centimetres of fluid which was very thick with pus and under slightly increased pressure. It contained numerous pneumococci, but no bacilli.

Antibacterial antipneumococcal serum was given intrathecally. The next day the pus was so thick that it would not run through the puncture needle, puncture was therefore done through the fontanelle, but the fluid was so thick here also that only a drop could be obtained. Antipneumococcal serum was given subcutaneously.

The child died eleven days after admission. The eyes were examined the day before death, the fundi were normal. At no time was there any appreciable head retraction or Kernig's sign.

### AN UNUSUAL HERNIA.

By O. K. HARTRIDGE, M.B., Ch.B. (Melbourne),  
Honorary Surgeon, Roma Hospital,  
Queensland.

ONE is prepared for slight abnormalities in hernia, but the case now reported is of interest, since it is not described in the literature at my disposal. This man had two distinct congenital sacs on the left side.

T.J.O'S., aged fifty-eight years, was admitted to the Roma Hospital under my care complaining of pain and swelling in the left groin following a kick from a horse some months previously. The diagnosis was left oblique inguinal hernia. With the assistance of Dr. J. F. Merri-  
lees I operated under block anaesthesia with "Novocaine." On opening the inguinal canal a large sac was found containing omentum some of which was adherent to the sac wall. The omentum was freed, returned to the abdomen and the sac explored. The abdominal orifice admitted the thumb and the lower end was continuous with the tunica vaginalis of the testicle. Whilst freeing the sac it



became evident that the inguinal canal contained more than its usual contents. On investigation another sac was found lying posteriorly to the first. This one contained a small portion of the sigmoid colon, some of the appendices of which were adherent to the sac wall. Explored downwards, the posterior sac was found to communicate with the anterior just above the testicle, the edge of the dividing wall being most prominent. This second sac opened into the abdomen to the inner side of the other, being separated only by the crista which was tough and unyielding. The orifice was somewhat larger than the outer one.

Owing to the large area covered by these two sacs it was decided to convert them into one by dividing the thickened wall between them up into the abdomen. This opening was then firmly closed by mattress sutures, the redundant tissues being drawn up and secured under the upper and outer part of the conjoined tendon. The operation was completed in the usual manner. Firm union and a good result were obtained.

#### A CASE OF DOUBLE ECTOPIC GESTATION.

By F. S. STUCKEY, M.B., Ch.M. (Sydney),  
*Inverell, New South Wales.*

RECENTLY a girl was brought in by car some thirty miles to my front gate, complaining of severe abdominal pain of sudden onset. The pain was pelvic in location and more localized in the left side. Her general condition and pulse were good. I sent her into hospital for rest and observation. Her abdominal condition steadily improved and in about ten days' time she was allowed to return home. There was not at any time any abdominal rigidity.

A few weeks later I was called to a place in town where she had in the meantime taken service. She was again in severe abdominal pain, more generalized, but with a definite localizing tendency to McBurney's point. There was more rigidity of the abdominal wall, especially on the right side and an anxious abdominal facies was noticed. The pulse and temperature were not notably disturbed. She was again sent to hospital and kept under observation, whilst her people were communicated with and after a couple of days, although the trouble was again subsiding, she was operated upon.

The only other vital point to emphasize is the behaviour of the menses. These had been missed for six weeks on the first occasion of trouble, but had returned slightly at that time and again at a later period.

At operation a middle line incision was made and the pelvic organs were first investigated. There was some free dark blood in the abdominal cavity. With a little difficulty the left tube and ovary were lifted into view. The fimbriated extremity of the tube was glued firmly to the ovary by a blood clot more or less organized and the outer third of the tube was swollen and congested and had the typical appearance of an early pregnancy in the outer end of the Fallopian tube. The ovary when liberated seemed normal otherwise. The enlarged tube was clamped and removed and the raw edge oversewn.

Further investigation revealed blood clot in the pouch of Douglas and when the right ovary and tube were eventually freed, I was considerably surprised to find that more than the outer half of the tube was occupied by an undoubted tubal pregnancy which had evidently emptied itself backward through the fimbriated extremity with a moderate amount of hæmorrhage, leaving a small foetal mass distinctly outlined in the line of the tube. This tube also I felt obliged (though reluctantly) to remove. A couple of rather obvious cysts in the ovary were also extirpated.

The appendix when investigated was definitely congested and showed the stigmata of recent and remote trouble in the way of fibrous constriction, sharp kinking and adhesions. This was therefore removed, the stump was invaginated and the abdomen closed.

There was nothing unusual in the subsequent history. Recovery was uninterrupted.

I must add that diagnosis of ectopic pregnancy was provisionally made in the first place; whilst in the second place the burden of suspicion fell more on the most frequent source of acute abdominal trouble, the appendix.

I have claimed that the trouble in both tubes was of the nature of tubal pregnancy. This rests wholly on macroscopical appearances. I realize that the material of both tubes would have repaid careful microscopical examination and that in the absence of such the claim cannot be considered to be definitely established.

The history seems to point to a double conception having occurred, one in each tube, whether as the result of a single congress or on separate occasions, I have not inquired sufficiently to discuss. After developing to the stage of five or six weeks apparently the left tube attempted to deliver itself of its burden through its fimbriated extremity. This accounts for the first attack of acute pain, localized more to the left of the lower abdomen and pelvis. The right tubal pregnancy continued for a further period of four or five weeks and then ruptured, again making escape through the fimbriated extremity without bursting the tube itself. The congestion and irritation of the peritoneum involved an appendix which had already suffered previous damage and added the symptoms of an inflamed appendix to those arising from the effused blood and the rupture of a pregnant tube.

There are several matters open to discussion: (i.) Whether operation should not have been performed during or following the first attack. (ii.) The duty of examining both tubes and ovaries before adopting drastic measures with either, especially in a woman at the very beginning of her child-bearing period. (iii.) The feasibility of more conservative treatment of one or both tubes. (iv.) The outlook as regards subsequent pregnancy and child-bearing. (v.) The reason for tubal pregnancy occurring in an apparently normal, healthy girl in the absence of gonorrhœa or any constitutional taint. (vi.) The obligation of having all material likely to be of general interest thoroughly investigated.

#### TWO CASES OF POLYCYTHÆMIA.<sup>1</sup>

By F. S. HANSMAN, M.B., Ch.M. (Sydney),  
M.R.C.P. (London),  
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Royal Prince Alfred Hospital,  
Sydney.*

I WOULD like to bring forward some problems which arise in cases of polycythæmia. The following is an illustrative history:

S.P., aged sixty-six years, was admitted on December 11, 1925, complaining of pain in the right big toe and general malaise for two weeks. Fifteen years previously he had undergone right nephrectomy and since then he has had some degree of cyanosis.

On physical examination a cyanotic appearance of the face, especially of the nose and ears and of hands and of toes was manifest. The right big toe had a typical gouty appearance.

The heart was apparently normal except for an accentuated second aortic sound; arteries were soft and not thickened. On examination of the abdomen definite splenic enlargement and a discrete tumour below the spleen (? left kidney) were found.

As the patient was to have X ray therapy, I was interested to see if any relationship could be demonstrated between the blood count, uric acid content of the blood, viscosity of the blood, basal metabolism and size of the spleen. No relationship could be established, except perhaps that the blood count and size of the spleen tended

<sup>1</sup> Read at a meeting of the New South Wales Branch of the British Medical Association on May 13, 1926.

to vary together, but in another patient with 11,210,000 red cells the spleen was not even palpable.

The greatest difficulty is to explain the basal metabolic rate in these cases; though always definitely raised, it does not seem to be due either to:

- (i.) The viscosity of the blood throwing more work on the heart, for the metabolism was as high when the blood was twice as when it was three times as viscid as normal.
- (ii.) The metabolism of the white blood cells which are the assumed cause of high metabolic rates in the leuchæmias. The metabolism was the same (+ 25%) when the white cells were 5,600 as when they were 27,000 and the metabolism has fallen to +15% though the white cells number 24,000.
- (iii.) The increased oxygenation of the tissues. This cannot be assumed to increase the rate of cell metabolism, as oxygen is always present greatly in excess of the needs of cells under basal conditions.
- (iv.) Any demonstrable enlargement of the thyroid. In this patient the thyroid is not apparently increased in size or vascularity.

In a recent *post mortem* examination on a case of polycythæmia in which the basal metabolic rate was + 23%, the thyroid weighed forty-seven grammes, but sections of the gland did not indicate any increase in functional activity. Dr. Tebbutt reported that many acini manifested very flat epithelium and peculiar staining as if necrotic. Vessels were dilated and sometimes thrombosis and hemorrhages were present.

The greatly increased activity of the bone marrow may be responsible. In the above case the whole of the yellow marrow was found *post mortem* to be replaced by blood forming tissue characterized by definite leucoblastic activity. Though the blood count and basal metabolic rate do not vary together, the bone marrow may still be the responsible agent, as the blood count is determined by the resultant of blood formation and blood destruction and is therefore not a direct index of marrow activity. Still it is hard to think that the bone marrow could increase the whole metabolism by a quarter.

A comparison of the blood counts and the relation of plasma to whole blood in the two cases, S.P. and R.G., are interesting.

The red cells of S.P. numbered 8,540,000 per cubic millimetre. Practically no plasma was present, so that there was room for no more red blood cells. When the red cells numbered 7,190,000, the ratio of plasma to whole blood was 1: 6.6.

In R.G. the red cells numbered 11,210,000 and the ratio of plasma to whole blood was 1: 6.

It would be interesting actually to measure the red cells in these cases. Unless the sizes are materially different how can we explain the relation of the counts to plasma?

Lastly comes the question of blood pressure. How do these patients force blood which is two to three times normal in viscosity through the tissues by exerting a pressure of 140 millimetres of mercury in one case and 130 millimetres of mercury in another.

The findings in the patient S.P. are set out in the accompanying table.

The findings in patient S.P. may be compared with those of R.G., aged fifty-one years, a male:

Blood pressure (systolic), 140 millimetres of mercury.  
Red cells = 11,210,000 per cubic millimetre.  
White cells = 18,200 per cubic millimetre.  
Basal metabolic rate = + 28%.  
Uric acid = 4.6 milligrammes per centum.  
Viscosity of blood = 2.5 times normal.  
Ratio of plasma to whole blood = 1: 6.

### LYMPHOSARCOMA INVOLVING THE RIGHT AURICLE AND GREATER VESSELS.

By ROBERT S. STEEL, M.B., Ch.M. (Sydney).  
Resident Medical Officer, The Coast Hospital, Sydney.

#### Clinical History.

The patient Mrs. S., aged forty years, domestic duties, English, complained of attacks of breathlessness for the previous month and was admitted to the Coast Hospital on September 4, 1925.

The history given on admission was that the patient felt quite well till one year previously when she developed a right sided pneumonia and pleurisy. A "relapse" occurred eight months later. For the past year the patient had never felt as well as she did before her attack of pneumonia. Her doctor in England told her she was suffering with pulmonary tuberculosis. Apart from a few attacks of slight breathlessness on the voyage out from England she felt fairly well and had landed about one month previously. Attacks of breathlessness became more severe and more frequent and increased in severity so that when admitted she was practically always distressed and had during the previous few days noticed swelling of the right side of her neck.

She had had some slight loss of weight during the past month. She had no cough, but slight glairy expectoration at times. She had had no previous illnesses. She consulted a doctor a few days before admission and he explored the right side of her chest, but no fluid was obtained. Her bowels were acting regularly and her appetite was good.

On examination the patient appeared a well nourished woman, sitting up in bed, her lips were cyanosed, orthopnoea was present. There was greater difficulty of inspiration than expiration, inspiration was of the "leopard growl" type. The tongue was clean and moist.

The right side of the chest moved less than the left. There was a network of distended veins along the costal margin. Complete dullness was found on percussion over the right side of the chest. Bronchial breathing was heard over the whole of the right lung. The vocal resonance was increased on the right side. Breath sounds in the left lung were vesicular in type.

The heart was displaced to the left, the sounds were regular and the tone was good. Slight shifting dullness

TABLE SHOWING FINDINGS ON EXAMINATION OF S.P., WHOSE BLOOD PRESSURE WAS 130 MILLIMETRES OF MERCURY.

Date.	Red Cells, per c. mm.	White Cells, per c. mm.	Basal Metabolic Rate.	Uric Acid, mgm. %	Viscosity of Blood.	Ratio of Plasma to Whole Blood.
December 14, 1925 . . . . .	8,540,000	28,000	+ 25%	4	3 times normal	Practically no plasma after high power centrifuging
December 28, 1925 . . . . .	7,780,000	17,000	+ 21%	Plasma . . 8.5 Corps. . . 6.3		
February 5, 1926 . . . . .	7,810,000	16,000	+ 15%			
February 19, 1926 . . . . .			+ 16%			
March 16, 1926 . . . . .	6,400,000	5,600	+ 24.7%	7	Twice normal	
June 8, 1926 . . . . .	7,190,000	24,800	+ 15%	5.9	1.5 times normal	1: 6.6

Two exposures of the spleen to X rays were made between December 28, 1925, and February 5, 1926. One exposure was made between February 5, 1926, and February 19, 1926. One exposure was made between February 19, 1926, and March 16, 1926. Two exposures were made between March 16, 1926, and June 8, 1926.

was found in the abdomen. Palpable glands were present in the right side of the neck.

On X ray examination an opacity of the right lung was found with some slight displacement of the heart to the left. The appearances were regarded as possibly due to primary malignant disease of the lung or to massive unresolved pneumonia of the whole of the right lung.

Attacks of breathlessness were controlled only by morphine.

On September 7, 1925, pain was present in the breasts which were found to be oedematous. Two days later there was oedema of the abdominal wall.

On September 8, 1925, a blood count revealed a secondary anaemia. No reaction occurred to the Wassermann test. The patient was always breathless, except when under the influence of morphine and she was constantly cyanosed. The temperature was normal from time of admission. The pulse varied from 88 to 124 per minute.

We considered this to be a case probably of primary malignant disease of the right lung with pressure causing the above symptoms.

The patient died on September 18, 1925.

#### Post Mortem Findings.

The *post mortem* findings were of particular interest. The body was quite warm ten hours after death. Much oedematous fluid and venous oozing were found on cutting the subcutaneous tissue.

A little free fluid was present in the abdomen. The right ovary was cystic.

The pericardium was distended with dark brown fluid. No pleural effusion was found. The left lung was normal. A large hard mass was found involving the right lung and right side of the heart. Dense fibrous adhesions bound the right lung to the parietal pleura posteriorly. On section the central and greater portion of the right lung was found to be occupied by a firm tumour. A narrow margin of spongy lung surrounded the tumour. The right bronchus, surrounded by tumour, was patent.

On examination of the heart the upper wall of the right atrium was found to be 5.0 to 6.25 centimetres (two to two and a half inches) in thickness consisting of solid tumour. The endocardium appeared normal. The superior vena cava was completely surrounded by growth and tortuous, its lumen being greatly reduced in size by irregular projections from its wall making it difficult to pass an ordinary probe.

The tumour also involved the wall of the aorta, but in the specimen the lumen was not reduced.

Microscopical examination revealed the growth to be round cell sarcoma. The cells were mostly small round cells, but many larger round cells were present and numerous mitoses were taking place. The growth was regarded as being probably a lymphosarcoma.

## Reviews.

### SYMPTOMS IN CLINICAL MEDICINE.

SAVILL'S "Clinical Medicine" is a book not sufficiently well known among the younger generation, but the fact that it has gone into a seventh edition shows that it has attained a great measure of success.<sup>1</sup> It is now, too, a monument of wifely gratitude and cooperation, for the widow of the late author is still carrying on the work he began, and this edition is revised and in many respects rewritten by her. The field of medicine, however, is nowadays so large that she has been compelled to call many assistants to her aid in dealing with special subjects and the bulk of these will be recognized as well known authorities in medicine. Thus J. D. Rolleston writes on fevers, Dr. Robert Cole on mental diseases, Colonel W. S. Byam on tropical diseases, Professor Louise MacIlroy on diseases of women, Dr. Gordon Ward on diseases of the blood and spleen, and many others. It would, by the way,

add much to the interest if these special contributors could have their names attached to their contributions in the text, instead of the very brief reference in the introduction.

The plan of the book is unusual. It is a textbook of medicine written from the standpoint of symptoms. Every student knows the hopeless mental confusion experienced when after a laborious case taking and examination he tries to fit his facts to some description of "Osler." What more probably happens is that he learns the diagnosis from some other source and then turns up the chapter in "Osler" and proceeds to fit his own case to the description, a far less valuable exercise. Were he to use Savill, his method and result would be different. The book is divided into chapters of which the following are a few: clinical methods, the facies and then regional classification of local diseases, general debility, pallor and emaciation (an excellent chapter) and so on.

The case taking section is evidently written by a disciple of Mackenzie—the author insists so vigorously on the patient's account of himself—and on the importance of the "cardinal symptoms." Some, however, will not agree with his advice always to examine the implicated organ first, for example in a case of peritonitis. This may be so occasionally, but even in a case of apparent peritonitis to direct all attention to the belly may cause the chest to be merely skimmed over or not touched at all and the pneumonia which is the real trouble may be missed. More wrong diagnoses are made from incomplete examination than from any other cause and the commonest reason for incomplete examination is a too early assumption that such and such an organ or system is involved.

The nature of the book is best illustrated by an example. The patient's main symptom is severe abdominal pain, coming on suddenly. We turn to page 263 and find "Acute Abdominal Pain" and we find nine groups, namely (A) those coming on suddenly with collapse, containing six groups and (B) those coming on suddenly without collapse, containing three groups. The general features are shortly discussed and then the other symptoms and signs and their bearing on the cardinal symptoms are reviewed. Then follows the history, especially of the exact nature of the onset, for example strangulated hernia following strain or the typical onset of an intussusception.

The groups themselves are considered in detail, the fallacies which may occur, are reviewed in the differential diagnosis and finally a short but useful paragraph on prognosis and treatment follows.

On the whole the principle is much the same as in the well known "Index of Diagnosis," edited by Herbert French, but the addition of chapters on treatment and prognosis makes the book of much more general utility. It would be possible to imagine a practitioner with no help but this as a reference book making quite a successful attempt to cope with all but the most abstruse problems. There is, too, a very useful formulary of prescriptions in an appendix with a brief note on Nauheim baths. There is a separate chapter on the examination of urine, a chapter on pathological fluids and even a short account of basal metabolism. The section on examination of the blood, evidently from the pen of Dr. Gordon Ward, is especially good.

The weakest features of the book are the references to diseases of children. These are mostly sketchy or not given at all. For instance the cardinal symptom of scurvy is pain in the limbs, not pallor nor weakness; pain in scurvy is mentioned very casually, it should be given a special paragraph.

It is not possible to discuss the artificial feeding of infants in one page of even small print, but it is attempted. But it is in the section on pyrexia that the child fares worst and where the unhappy seeker after knowledge is most likely to find little help. Many fevers in childhood are not of microbic origin at all. Probably in order of frequency the causes of infantile fevers are "unknown," digestive disturbances, pyelitis and inflammation of throat and ears. Fever in childhood deserves a whole chapter to itself, but indeed there is still needed a clinical textbook of diseases of childhood, written on the same plan as this book of Dr. Savill.

<sup>1</sup>"A System of Clinical Medicine Dealing with the Diagnosis, Prognosis and Treatment of Disease for Students and Practitioners," by Thomas Dixon Savill, M.D. (London): Seventh Edition; 1925. London: Edward Arnold and Company. Royal 8vo., pp. 1032, with illustrations. Price: 28s. net.



But apart from these comparatively minor defects the book is a most valuable one. It is rather dull reading, it has not the novel-like attractiveness of Trousseau or Cabot, but it is a mine whence most useful information can be quarried at very short notice and in its most useful form.

#### A TEXTBOOK OF SURGERY OF CHILDREN.

"SURGERY OF CHILDHOOD" by John Fraser will be welcomed by all who are specially interested in the study of disease in infancy or childhood, whether medical or surgical.<sup>1</sup> Almost every ailment that infants or children are subject to, and that has at any time been treated by surgical means, is featured in this work of two volumes.

Its scope is far more comprehensive than the surgery of childhood, as it includes much that is of purely medical interest. So much of children's surgery is bound up with embryology, that a description of this branch of science is included wherever it has any bearing on the causation of certain malformations and deformities.

Certain chapters which might have been omitted in a work purporting to deal with the surgery of children, have been written by other practitioners. Such a one is Chapter V. on transfusions and infusions in which the whole question of blood transfusion is fully dealt with, including the technique of blood group tests, as well as the operative technique of transfusion.

The greater part of the work, however, has the advantage of proceeding from the pen of a single writer who has evidently performed most of the operations described in the text. It is not clear why the author has relegated the chapter on congenital club foot to another surgeon. The opening chapter is devoted to the qualifications of the pediatric surgeon and to special points in the examination of children.

The chapter on surgical shock is particularly good. The subject of rickets is dealt with quite as fully as one would expect in a purely medical work and the different theories as to causation are set out, as well as the surgical treatment for the deformities caused by the disease. A short chapter is devoted to the surgical aspects of the blood and its diseases, including hemorrhagic disease in the newborn, as well as the different varieties of purpura. In the description of the different operative procedures recommended for various complaints it would have been better if the author had more clearly indicated those most favoured by himself.

The book is profusely illustrated mainly by reproductions of photographs and although the majority of these are good and decidedly helpful to the reader, there are many which do not clearly show what they are intended to demonstrate. The book could have been considerably reduced in size by their omission without any detraction from the value of the work. All the illustrations of burns, for example, on pages 19 to 24 and many of the reproductions of skiagrams could well have been omitted. The reproductions of photographs of dissections of fetuses are poor and drawings from these dissections would have been much better. The illustration of Hamilton Russell's method of treating fractured femur is incomplete and quite useless for demonstrating his method, especially as there is no mention of the method in the text itself. As one would expect, a very large section of the work is devoted to tuberculosis of bones and joints, including all known methods of treatment such as heliotherapy, treatment by the open carbon arc lamp and the mercury vapour lamp, also treatment by the different varieties of tuberculin; the relative merits of each are fully discussed. The author holds that the von Pirquet reaction is not of much value in the diagnosis of tuberculosis. He maintains that with reasonable care no danger exists in the forcible straightening of joints deformed as a result of tuberculosis. The description of the application of plaster jackets on page 312 would have been made much clearer by a few illustrations. He advocates excision of the knee joint in

advanced tuberculosis, but no warning is given of the shortening of the limb which is likely to follow this procedure and which makes some operators refrain from following this advice.

The chapter on hydrocephalus is particularly good and contains most of the work that has recently been done on this subject. Much of the subject matter and many of the illustrations in this section are reproductions from an article by the same author in conjunction with Norman M. Dott, which appeared in *The British Journal of Surgery* of October, 1922. The section dealing with birth injuries is not up to the standard of the remainder of the work. The statement that facial paralysis in the new-born is due to the pressure of the forceps in front of the ear is not quite accurate. The generally accepted teaching of Holland on the causation of tearing of the *tentorium cerebelli* and the resulting hemorrhage is not mentioned.

The treatment recommended on page 472 for severe intracranial hemorrhage in the new-born and that on page 976 dealing with the same subject from a different point of view are not in accord with one another. The chapter on empyema is very concise and complete, although no mention is made of the difference in the physical signs in children and adults. Investigation of the intrapleural tension by a manometer is recommended in all cases before operation is undertaken. The operative technique whereby air is excluded from entering the pleura during operation and treatment, is recommended. No mention is made of any preference for a particular interspace for the drainage of the pleura. A chapter is devoted to the surgery of the genito-urinary system and the treatment recommended for pyelitis is purely medical.

There is an appendix on the making of celluloid splints. The book is written in a readable style and is well printed. There are a few typographical errors, such as *ligamentum tires* for *teres* on page 1046. In a book of this nature there is bound to be some overlapping and the few discrepancies mentioned detract nothing from the pleasure to be derived and knowledge gained by a study of this interesting and instructive work. The two volumes will be widely read by the student, general practitioner and specialist, as the whole work bristles with information of value to each.

#### RADIOLOGY FOR THE GENERAL PRACTITIONER.

DR. ENFIELD in justifying his publication, "Radiography: A Manual of Technique, Interpretation and Therapy," says that it is meant for medical men, not specialists in radiology, who are obliged to do most of the X ray work in connexion with their practices. His object is to present a working idea of the every day type of case that requires radiological examination.<sup>1</sup>

The author fails to give any account of the physics of coils, transformers and tubes. He has made available his experience in the selection of apparatus according to the use to which it will be put, and those confronted with the problems of a new installation will find much of value to them in these pages.

The importance of attention to details in technique as regards position of the patient, exposure and development is duly emphasized and each of the usual examinations is presented in a form that will be a genuine help to both novice and consultant. The interpretation of the commoner lesions is ably dealt with, the author emphasizing the rule rather than the exception.

Reference is made to newer developments in this field of work, for example the use of "tetra" dyes in gall bladder diagnosis and rapid exposures with high milliamperage in chest and other radiography. The section on treatment is scanty and perhaps it would be wiser not to encourage the medical men for whom this work is specially written, to use this powerful agent in treatment without special training. As it is the chapter on therapy falls far short of an adequate presentation of the subject. The illustrations satisfactorily help the text and the publishers have done their work well.

<sup>1</sup>"Surgery of Childhood," by John Fraser, M.C., M.D., Ch.M., F.R.C.S.E.; in two Volumes; 1926. London: Edward Arnold and Company. Royal 8vo., pp. 1152, with illustrations. Price: 42s. net, two volumes.

<sup>1</sup>"Radiography: A Manual of X-Ray Technique, Interpretation and Therapy," by Charles D. Enfield, M.D., F.A.C.P.; 1925. Philadelphia: P. Blakiston's Son and Company. Imp. 8vo., pp. 306, with illustrations.

## The Medical Journal of Australia

SATURDAY, JULY 31, 1926.

### Honorary Physicians and Honorary Surgeons.

THE privileges enjoyed by honorary medical officers of public hospitals are generally recognized. The opportunities for study and for undertaking work of an interesting nature, to say nothing of the status conferred by common consent on the holder of an honorary position are appreciated by all. The keen competition displayed by prospective appointees would be sufficient evidence of this, if any were needed. Of the duties and responsibilities not so much is heard. It is well that they should be emphasized. Some of them are frequently overlooked, no doubt unintentionally and others again are not always recognized as duties.

Little need be said of the duty and responsibility of an "honorary" as far as the patient is concerned. The patient is entitled to all the skill and care which can be bestowed on him, and he is a human being with a nervous system and with susceptibilities which should be considered. The name patient or sufferer alone is indicative of this. It may also be mentioned in passing that this is one reason for the elimination of the word "case" in medical literature when "patient" is meant. In carrying out his duty to the patient, an honorary medical officer will also be doing his best for the institution to which he is attached and to which he should strive to bring honour and credit.

The attention of honorary medical officers, be they physicians or surgeons, needs to be drawn very forcibly to their duty in regard to contributions to medical literature. The debt owing by them in this regard is really twofold. They have a debt to medical science and to their less fortunate colleagues not on the staff. Knowledge can be advanced in many ways. The ball of progress does not lie solely at the foot of the research worker,

that praiseworthy individual, regarded by his *confrères* in active practice as a man of somewhat unusual tastes, content to live on the smell of the proverbial oiled rag and by the laity as a recluse, surrounded by a halo of chemical smells, within earshot of his laboratory animals and scarcely able to move for microscopes and mechanical apparatus. The history of medicine is bristling with names of men engaged in active practice who by recording their observations and investigations have added to knowledge and achieved fame for themselves. The names of Sydenham, Jenner, Lister, Mackenzie, Macewan, Horsley, Wright and many others can be recollected at once in this regard. It is extraordinary how difficult it sometimes is to obtain reports of interesting conditions from people who can easily make them. Medical knowledge more than any other should be common property. If a practitioner by being on the staff of a hospital gains knowledge or experience which can be of use to others in the treatment of disease, it is his bounden duty to publish that information so that all may use it.

Perusal of THE MEDICAL JOURNAL OF AUSTRALIA will show that numbers of practitioners realize their duty and carry it out. Many, however, are neglectful. First of all there is the senior man who for many years has held posts of honour and importance. He has accumulated vast wealth of experience. He has seen changes of method and knows the value of each. He could teach lessons which would be of great help to others, not only in diagnosis, treatment and technique, but also in ætiology and pathogenesis. It is much to be regretted that there are some men who answer to this description.

Then there is the man who sees patients and treats them with perhaps all the care and skill at his command, but who does not try to investigate the why and the wherefore. There is also the complacent person who "cannot be bothered writing things up" and the one who "never gets anything worth reporting," is not infrequently encountered. The impression seems to exist in some quarters that a communication to a medical journal should necessarily include an account of some new discovery or

a description of some original investigation. These are naturally of paramount importance, but reports of everyday cases of didactic value, of successes or failures and of mistakes may help others. A new point of view may set someone else thinking. Every knot in a tangled skein need not be unravelled by one person.

Lastly there is the conscientious practitioner with perhaps all the attributes necessary for successful authorship, who is deterred from writing by the knowledge that some of his brethren with less lofty ideals write purely for the sake of intra-professional advertisement. The publication of articles in medical journals is one of the few methods of legitimate advertisement open to medical practitioners. After all the matter presented and the method of its presentation generally proclaim the man and the man with a message need have little fear that he will be misunderstood. Even if this were not so, the carrying out of a duty must outweigh the fear of the attribution of wrong motives.

In conclusion reference may be made to a matter which was brought up for discussion in the correspondence column of this journal recently by Dr. C. H. Jaede. Dr. Jaede complained that when he sent patients to a hospital for treatment, he received from the doctors at the institution no information as to what happened to the patient while under treatment or as to his condition on discharge. Dr. Jaede was justified in his complaint. Dr. Derham and Dr. Booth have both called attention to the fact that in Victoria a form is issued by the Victorian Branch of the British Medical Association for use in such cases and that the form is sent to the hospital with the patient for return to the private medical attendant on discharge of the patient. Dr. Derham has also pointed out that the honorary and resident medical officers are more diligent in doing their part of the work than general practitioners are in making use of the facilities provided. The private practitioner's share in this arrangement is a different story; the medical officer of the hospital can do something for the outside practitioner and incidentally for the patient.

## Current Comment.

### THE ACTION OF LEAD AND OF RADIUM ON ERYTHROCYTES.

SINCE the discovery of X rays by Röntgen and of radium by Pierre and Marie Curie many expedients have been employed to enhance the destructive effects of the  $\alpha$  particles and of the  $\beta$  and  $\gamma$  rays on immature and malignant cells. The chief difficulty in regard to the therapeutic use of X rays and radium rays is that the doses that damage or destroy pathological cells, are by no means indifferent to normal tissue cells. Moreover, there is evidence that under certain conditions the effect of these rays is one of stimulation to hyperplasia. Moppett has put forward the view that this antagonistic action is determined by the wave length of the particular rays employed. He has brought forward evidence of a destructive action of X rays of wave lengths spaced almost at regular intervals, while the rays of the intervening wave lengths are endowed with the property to stimulate growth. So far no one has published any records to disprove Moppett's contention. The earlier views were that cells were stimulated to excessive growth by doses that are insufficient to produce destruction. It is still uncertain whether or not the application of X rays in quantities too small to effect destruction induces an overgrowth of cells. If the action is as Moppett would have it, radio-therapy would be much more valuable than it is at present as soon as the physicists discover a practical method of selecting rays of a given wave length for delivery to a tumour. Such a method is not available, but even if it were, there would still be the problem of preventing the damage from attacking healthy body cells at the same time as the pathological cells. The suggestion has been made by various observers that the action of X and analogous rays could be increased and restricted to particular groups of cells by the introduction of certain substances that would increase the production of secondary radiation. The most likely substance for this purpose is lead. It is remarkable that Blair Bell claims that particular lead salts, when injected intravenously in subjects of malignant disease, bring about a resorption of the cancer cells. He has not produced any evidence that the lead is specifically attracted to the cancer cells. In the absence of any affinity of cancer cells for lead it would be necessary to have recourse to injections of lead salts into a tumour to be treated, if it were desired to increase the production of secondary radiation. But these are mere theoretical considerations. Before the proposal to utilize this alleged property of lead can be regarded as a serious one, it is essential to have definite information on the effect of lead, of X and the analogous rays and of a combination of lead and the rays on normal and pathological cells. Some data are already at hand. We wish to direct attention to some new work in this connexion. Dr. H. E. Pearse has endeavoured to determine the effect of irradiation on tissues that have been exposed to the action of

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lead salts.<sup>1</sup> In order to secure measurable results, he elected to experiment on erythrocytes. As he points out cells of varying degrees of maturity can be used and hæmolysis furnishes a quantitative index of the destructive process. The blood of rabbits that had been made anæmic by repeated bleeding in order to render the red blood corpuscles more resistant to the action of hypotonic sodium chloride solution, was collected with great care, defibrinated and the cells washed in Ringer's solution and resuspended. One sample of suspended cells was brought into contact with a weak solution of lead chloride for a sufficient time to produce satisfactory impregnation; another sample was treated with lead in the same way and then exposed to the action of radium emanation; while a third sample was irradiated without previous treatment with lead. Control samples were kept. Due precautions were taken to avoid error arising from hæmolysis due to extraneous causes. The first set of experiments revealed that both mature and immature erythrocytes are more resistant to the hæmolyzing effect of hypotonic sodium chloride solution after treatment with lead than without such treatment. This increased fragility is recognized by the determination of the degree of hæmolysis produced by varying strengths of the sodium chloride solution. Immature treated cells remained un hæmolyzed in 0.42% sodium chloride solution; in 0.3% there was about 50% hæmolysis; complete hæmolysis occurred in 0.06% sodium chloride solution. Untreated immature cells started to undergo hæmolysis in 0.48% salt solution and complete solution occurred in 0.12%. Similarly the mature treated cells did not become disintegrated in 0.5%, while complete hæmolysis occurred in 0.24%. Untreated mature cells went into complete solution in 0.3% sodium chloride solution. No increased fragility was observed of erythrocytes that had been exposed to radium emanation. A slight increase in the fragility was noted in the erythrocytes after treatment with lead and irradiation. This was more evident in the mature than in the immature cells.

The next set of experiments had the purpose of determining the effect of treatment with lead and irradiation on the hæmolytic process. Radium emanation produced practically twice as much hæmolysis of immature as of mature erythrocytes. Treatment with lead chloride caused exceedingly little hæmolysis of immature cells, but about the same amount as radium caused of mature cells. Irradiation after treatment with lead salt caused more hæmolysis of mature cells than radium alone caused of immature cells. But irradiation after treatment caused over twice as much hæmolysis of immature cells as of mature cells. Expressed in another way, when the immature erythrocytes after "leading" were exposed to one millicurie of radium emanation for one hour, 53% of hæmolysis occurred; only 25% of hæmolysis resulted from the same treatment of "leaded" mature erythrocytes.

Dr. Pearse discusses the fact that lead damages mature cells more easily than immature cells. He

makes some suggestions concerning the firmer composition of young than old cells and attempts to find some argument in the fact that normally the immature cells are less readily hæmolyzed than the mature cells. These explanations do not appear to carry us far. On the other hand when he inquires into the differences in the chemical composition of the immature and mature erythrocytes, he treads on safer ground. It appears that erythrocytes have an affinity for lead in virtue of their phosphate content. When the cells are suspended in a salt solution, such as Ringer's, the phosphates tend to pass out of the cells into the medium and the lead is claimed and held by the phosphates outside the cells. Dr. Pearse remarks that some investigators have discovered a higher phosphate content of immature red blood corpuscles than of mature corpuscles. It is known that the phosphorus and calcium metabolism is more active in the developing animal than in the adult and that there is an intimate relationship between growth and its vitamin stimulators and the phosphorus content of cells. In all immature cells and cells undergoing active mitosis there appears to be a large provision for the storage of phosphorus. Moreover, it has been shown that in carcinoma there is a disturbance of the normal relations of phosphorus in the cells. It is safe to assume that the phosphorus in immature erythrocytes and in immature or abnormal cells generally is less fixed and in larger quantity than in the corresponding mature cells. Treatment by lead salts would exercise an effect provided that the lead is not claimed by the phosphorus in the tissue fluids before it has an opportunity to enter the cells. Whether lead has an effect or not as a result of fixing phosphorus outside cells and thus modifying the phosphorus metabolism is uncertain.

The experiments of Dr. Pearse demonstrate that immature erythrocytes are hæmolyzed by radium more readily than are mature erythrocytes. No explanation can be offered to account for this. It is easy to understand why radium acts much more energetically on cells pretreated with lead than on normal cells. Whether the lead is deposited on the surface of the erythrocytes or is present in the suspension fluid, secondary radiation would be produced and the effect would be greatly intensified.

Dr. Pearse suggests that lead alone damages the erythrocytes, but does not cause hæmolysis in immature cells. He points out that the damage of the two noxious agents, lead and radium, is not necessarily the same. We should prefer to leave it undecided whether or not actual direct damage is produced by the lead; the effect appears to be a fixing of some of the phosphorus. Ultimately, no doubt, the cell would become depleted of the essential phosphorus content and death would result. That lead does destroy endothelial cells by a chemical action has been proved long ago. This work seems to be important, since further observations may reveal the nature of the attack by X rays on pathological cells and may thus lead to a better understanding of the chemical and physical characters of these cells.

<sup>1</sup> Archives of Internal Medicine, May 15, 1926.

## Abstracts from Current Medical Literature.

### GYNÆCOLOGY AND OBSTETRICS.

#### The Treatment of Puerperal Infection by the Intrauterine Injection of Glycerine.

H. J. PHILLIPS (*Proceedings of the Royal Society of Medicine*, February, 1926) has experimented with the treatment of puerperal infections by injecting glycerine into the infected uterus. The patient is placed in the dorsal position and the toilet of the external genitals is gently carried out. The vagina is then exposed by passing a posterior speculum and an anterior retractor; each individual lesion is thus brought clearly into view and must be carefully attended to. Finally the cervix and cervical canal are cleaned and the uterus is now ready to be approached. A ten cubic centimetre "Record" syringe is filled with pure glycerine; to the end of the syringe is applied a long terminal eyed soft rubber catheter, size 6. The catheter is pushed right up to the fundus. The glycerine is then slowly injected, giving an even spread over the whole surface of the mucosa. The catheter is left *in situ*. A piece of sterile ribbon gauze is tied round the free end of the catheter which is pushed into the vagina, the gauze protruding beyond the vulva. In this way the catheter may be removed in six hours' time by simple traction on the gauze. In the majority of instances the uterus was drained once a day, in the more severe cases twice. The average number of applications per patient was seven. The treatment was continued till all signs of active inflammation had subsided. Of eighty-seven patients treated by this method only 13.7% developed complications, less than half the percentage of a series treated in the ordinary way. The mortality among the first one hundred patients treated was only 13%. The absence of pus formation in these cases and of local inflammatory complications indicates that the dehydrating action of the glycerine helps to stop direct spread of local infections and thus tends to minimize the danger of subsequent blood infection or infection of the lymphatics.

#### Radiation and Surgical Treatment for Fibromyomata of the Uterus.

FRANCES A. FORD, of the Section of Roentgen Therapy, Mayo Clinic (*Surgery, Gynecology and Obstetrics*, February, 1926) reviews the histories of two hundred and fifty patients operated on for fibroids consecutively in 1918 and three hundred and forty-four patients treated with radium from 1918 to 1924. The author analyses the series with eleven tables of statistics and concludes that in the unselected cases of fibromyomata of the uterus treated by operation and by radio-therapy, a relatively high percentage of the latter group has been found to require further treat-

ment, either repeated radiation (18%) or operation (13.7%), as compared with 4% of the surgically treated group who received further treatment. It is true, however, that more recent cases, particularly after X ray treatment, are yielding definitely better results though greater experience in the dosage is required. A study of individual cases reveals so many thoroughly satisfactory results with radio-therapy that the discrepancy in the total results must apparently be attributed to injudicious selection of cases or to inadequate dosage. Great care must be exercised to exclude malignant disease at the time of radiation. Curettage should precede treatment in the presence of suspicious symptoms. Inflammation, while apparently uninfluenced by radiation *per se*, as is shown by the lack of reaction to X rays, is without doubt occasionally aggravated by the manipulation incidental to the application of radium. Unusually hard fibromyomata containing extensive calcium deposits cannot be reduced satisfactorily by radiation. An incarcerated pelvic tumour is undoubtedly best removed surgically because of the inability to exclude adnexal disease. A skiagram may occasionally aid in the detection of calcium deposits within a tumour. There is need of extreme care in excluding malignant disease because in six patients treated by radio-therapy a well established malignant process appeared within a year of the treatment. In several others it appeared within three years. This may not be a higher percentage than that of pelvic malignant disease for all women of their age (1.1%). However, it raises the question whether a focus of relatively devitalized tissue with altered blood supply may favour malignant change.

#### Cæsarean Section.

A. HOHENBICHLER (*Wiener Medizinische Wochenschrift*, March 20, 1926) gives a history of an unusual case in which delivery by Cæsarean section was necessary. The patient had two normal confinements previously and there was only a very slight degree of pelvic contraction. She was admitted with a history of intermittent pain for eight days. Owing to the rigidity of the abdominal wall nothing definite could be palpated, although the fetal heart could be heard. On vaginal examination the presenting part could be felt above the brim, whilst the cervix was drawn up well behind the symphysis. There was definite tenderness in the posterior fornix. No advance was made after several hours and although no fetal heart sounds could be heard, it was decided to perform Cæsarean section. Craniotomy was contraindicated owing to the position of the cervix and its non-dilatation. After the abdomen was opened a strong band of adhesions was found extending from the posterior surface of the fundus to the pouch of Douglas. When the uterus was opened the fetal head was found to be flexed laterally and

jammed tightly in the brim. Undoubtedly the obstruction to normal delivery had been caused by the band of adhesions pulling the fundus downwards and backwards and displacing the fetal head forwards.

#### The After History in Cæsarean Section.

F. C. WILLE (*Deutsche Medizinische Wochenschrift*, April 2, 1926) describes the subsequent obstetrical histories of all patients at the Charité Hospital, Berlin, on whom Cæsarean section had been performed. Out of 28,917 deliveries there were 357 cases of Cæsarean section. The primary mortality was 1.4%. Subsequent pregnancies were noted in 118 instances. No cases of spontaneous rupture during pregnancy were observed. In the majority of subsequent pregnancies delivery was accomplished by another section. Forty-nine had a second operation, nineteen a third and one a fourth. Normal delivery was noted with nineteen. The average duration of labour was twenty-one hours. Nine of the patients had had no previous delivery *per vaginam*. Thirteen required forceps or version and extraction as a breech presentation. All the mothers made a good recovery. Four cases of rupture of the uterus occurred with one death. All were due to contracted pelvis. In two the rupture occurred after twenty-three and thirty-six hours' labour respectively. Both were operated upon and saved. The third had a *placenta prævia* for which a bag was inserted. Rupture occurred after seven hours of labour. This patient died from hæmorrhage. The fourth uterus ruptured after version for a transverse presentation. Hysterectomy was performed on all, no account being taken of the extent of the rupture.

#### Anæsthesia in Obstetrics and Gynecology.

L. ADLER (*Wiener Medizinische Wochenschrift*, May 8, 1926) reviews his experiences with various methods of anæsthesia. In obstetrical work he maintains that morphine-scopolamine narcosis is unfitted for private work and is in any case too dangerous in its effects on the fœtus. He is enthusiastic concerning the synergistic method of Gwathmey. When the os will admit three fingers 0.006 gramme morphine in two cubic centimetres of a 50% solution of magnesium sulphate is injected subcutaneously. The magnesium sulphate solution is repeated in two to three hours, if the pains are not relieved. At the same time an enema composed of ether 70 parts, alcohol 8, quinine hydrobromide 0.6 and olive oil to 120 parts, is administered. Forty-seven patients had painless labours. Thirteen were fairly free from pain, while seven failures were due to giving the drug too early in labour. The failures emphasized the short duration of anæsthesia—four to five hours. No bad effects were noted on either mother or child. Spinal anæsthesia has been found wanting with abdominal operations.

The author prefers pure ether or a mixture of 90% ether and 10% chloroform. Owing to the cost of apparatus as well as the administration he has had no experience of gas and oxygen. Local anaesthesia was used in thirty cases in which there was a contraindication to a general anaesthetic such as tuberculosis, uncompensated cardiac lesions, severe anaemia. It is not practicable for the average patient. He favours it, however, for vaginal operations. Since 1914 he has used it in six hundred cases. Only 10% of patients required a small amount of general anaesthetic as well. Patients were given a sedative on the previous evening. If the peritoneum is to be opened a preliminary injection of morphine and scopolamine is given; a 0.5% solution of "Novocaine" and adrenalin is used. No bad after effects were observed.

## NEUROLOGY.

### Speech and Deglutition in Progressive Bulbar Palsy.

MACDONALD CRITCHLEY and C. S. KUBIK (*Brain*, December, 1925) have written a long paper on the subject of speech and deglutition in progressive bulbar palsy. They have based their remarks on the examination of a series of patients, five of whom died and came to autopsy. In each case the clinical diagnosis of amyotrophic lateral sclerosis was confirmed. Pathologically in all there was definite evidence of disease of the *nucleus ambiguus*. The view that the *nucleus ambiguus* supplies striped muscle is supported. Exhaustive microscopic examination of the muscles subserving speech and deglutition showed that no part of the musculature was exempt from atrophic change. This examination included the intrinsic musculature of the tongue and larynx, the constrictors of the pharynx and the elevators and depressors of the larynx. Inspection of the neck in cases of bulbar palsy usually reveals characteristic features. The head tends to be retracted because the post-vertebral muscles are relatively preponderant. The outline of the neck is distorted by atrophy of the sternomastoid and subhyoid muscles. The platysma is prominent. The larynx is dropped in the neck. In most cases it is possible by a sharp tap to obtain a reflex contraction of any of the atrophic muscles. The earliest sign of speech disorder is usually a slight nasal timbre. In other instances the first evidence of weakness is noticed when the patient sings. Later some trouble appears in the articulation of certain consonants, particularly labials (p, b) and linguals (l, r). Next all consonants become difficult and the final stage is one of complete anarthria, although sound of a harsh nature can be emitted. Coincidentally the acts of yawning, laughing, crying and coughing are all changed and the power to expectorate is lost. Difficulty in swallowing is often an

early symptom, it equally affects the disposal of liquids and solids. The act of drinking is executed in characteristic fashion, the head being thrown far back because the atrophic tongue unaided cannot force back the liquid. In the case of solids the maximum effort is required to drive the food through the faucial pillars into the oropharynx. These swallowing difficulties are well and clearly seen when the patient in attempting to dispose of an opaque meal is examined under a fluoroscopic screen.

### Varicella-Myelitis.

KNUD H. KRABBE, in recording a case of varicella-myelitis (*Brain*, December, 1925) mentions that while acute myelitis is not uncommon after enteric fever, measles and scarlet fever, it is rarely associated with varicella (chicken pox). This is surprising when consideration is given to common association of *herpes zoster* with varicella and to the fact that herpes may even alternate with varicella in the course of an epidemic. The patient was a boy aged eight years, whose signs of myelitis appeared ten days after the eruption of varicella. There were motor paralysis and sensory loss below the level of the nipples, bladder disturbance and cerebro-spinal pleocytosis (thirty-seven cells per cubic millimetre). These signs gradually passed off and in two months recovery was complete. Just as chicken pox usually takes a favourable course, so also it appears that a good prognosis may be given should myelitis arise as a complication or sequel.

### Respiratory Disorders in Epidemic Encephalitis.

W. ALDREN TURNER and MACDONALD CRITCHLEY (*Brain*, March, 1925) describe in detail seven illustrative cases of respiratory disturbance associated with epidemic encephalitis and consider that such disturbances form a definite clinical entity and play an important part in the symptomatology of the disease. The disturbances are of the most diverse nature ranging from simple alterations in time to the most bizarre distortions of the normal mechanism. The following classification is adopted. (i.) Disorders of the respiratory rate; (ii.) dysrhythmia; (iii.) respiratory "tic." Any combination of these groups may arise. Respiratory phenomena may occur as symptoms of the acute attack, as residua or as remote sequelae. They may form the sole after-effect, but more commonly they are associated with other physical or psychical sequelae. Children and young adults are particularly prone to manifest abnormal breathing, while inversion of the sleep rhythm and disorders of conduct commonly coexist. The influence of sleep and of the emotions upon the breathing is very decided and in most cases a temporary inhibition of the disorder can be produced by voluntary effort. It is probable, therefore, that the pathogenesis of these phenomena lies in a derange-

ment of the involuntary psychomotor control of respiration which is maintained by various cortico-pontine pathways, capable of anatomical demonstration. The lesion, therefore, is placed at a level higher than the so-called respiratory "centres." Prognosis is serious when respiratory abnormalities appear during the acute phase, a large proportion of such cases proving fatal. No treatment is known which is of any avail.

### The Lesions in Cretinism.

G. MARINESCO (*L'Encephale*, September, 1924) writes concerning the histological examination of the nervous system in a case of cretinism or congenital myxedema. The patient was fifteen years old and had had no thyroid treatment by mouth but a thyroid graft had been attempted two years before death. It was evident that the brain was underdeveloped and the cerebral cortex had some infantile characters. It was thin, its nerve cells stunted and its nerve fibres in certain important particulars indifferently represented. There was no lack of chromophilic granules in the larger nerve cells of brain, cord or cerebellum. In the tissue spaces of the white substance and in some cells granules of glycogen were found. Marinesco thinks that the morbid changes can be referred to diminished activity of bodily processes, deficient oxidation of tissues and consequent hypothermia.

### The Intensive Use of Bromides in Psychoses.

WILLIAM W. WRIGHT (*American Journal of Psychiatry*, January, 1926) following Ulrich who treated cases of melancholia by the use of a salt-free diet and bromide given to the point of intoxication, and Klasi who treated cases of *dementia præcox* by prolonged narcosis with "Somnifen" and "Luminal" makes a report on the intensive use of bromides in psychoses. The total number of patients treated by the writer was eighty-five (three males, eighty-two females), mainly sufferers from *dementia præcox* and manic-depressive states. The salt used was the bromide of sodium. The daily dose varied; in some cases 12.6 grammes (two hundred and ten grains) were given for a few days and then remitted, while in others 5.4 grammes (ninety grains) were given for longer periods. Daily observation of results ruled the administration. The results were summarized as follows. Patients manifesting habit deterioration such as soiling, wetting and destructiveness and those subject to outbreaks of violence and depressed, agitated, food-resisting patients were decidedly improved and on the whole the results were very satisfactory. During the course of treatment it was found better to keep the patient up and about, because an ataxic gait may be the first indication for discontinuing the drug and when toxic symptoms arose saline solution freely given by the mouth effected prompt elimination of the bromide.



## British Medical Association News.

### SCIENTIFIC.

A MEETING OF THE SECTION OF OBSTETRICS AND GYNÆCOLOGY OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on March 17, 1926, DR. RALPH WORRELL, the Chairman, in the chair.

#### Forceps.

DR. CECIL COGHLAN read a paper entitled: "Forceps" (see page 143).

MR. FOURNESS BARRINGTON expressed his appreciation of the paper, particularly as the discussion of new things often meant progress. He thought that Kielland's instrument might be useful in occipito-posterior positions. The flattening of the curve would help to secure the three requisites in such cases—securing a firm grip, the increase of flexion and the favouring of normal rotation. Milne Murray in his adjustable axis-traction forceps for occipito-posterior cases had modified the ordinary forceps by flattening the curve to a radius of fourteen inches instead of seven inches. Speaking generally he could see no real advantage in the Kielland instrument over Milne Murray's axis-traction or adjustable axis-traction forceps. The last named were especially useful in difficult cases. Instead of making a series of pulls with the line of traction in one position as was done with the ordinary axis-traction forceps, the operator made a succession of pulls, changing the position of the handle and therefore the direction of traction, until he found the adjustment which seemed to have most effect in advancing the head. In justo-minor pelvis the half-locking joint was actuated so as to be fixed at a mark nearer the application handles than the normal one, marked "5"; in flat pelvis it was necessary to shift backwards.

Much of the non-success of the ordinary Milne Murray's axis-traction forceps was due to faulty construction and the usual mistake concerned the traction rods. There was a ready means for testing their accuracy by making a mechanical projection of the left blade of the forceps with its hollow side upwards on a piece of paper. The point at which the shank joined the curve of the blade and the centre of the tip of the blade were marked. These two points were joined by a straight line. This was bisected by a line at right angles to it. A circle was described going through the first named points. A tangent to the circle which ran parallel to the line formed by joining the first named points was drawn. If the traction rods were accurately constructed, the traction-bar plate would lie on the tangential line when the rod lay close to the shank.

The great objection to the Kielland forceps was the absence of a definite and accurate indication as to the line of traction which was varying all the time. In Milne Murray's forceps, if the traction-rods were kept close to but not actually touching the shanks, the pull was exerted precisely in the axis of the pelvis.

Dr. Coghlan had said there was no special value of the Kielland forceps at the outlet. The greatest value of Milne Murray's instrument was at the outlet, perhaps the most difficult and delicate part of the operation. The temptation to seize the application handles must be resisted; they should never be touched. The delivery of the head with a minimum of trauma to the pelvic floor could be effected by accurately constructed axis-traction forceps and in no other way and thus many gynæcological traumatic lesions prevented but this meant that plenty of time must be taken.

A good pair of forceps demanded scrupulous care. They should be taken down completely and all screws removed, cleaned and lubricated by "Chloretone inhalant" after each and every use.

Personally he very strongly advocated the general all-round efficiency of Milne Murray's axis traction forceps, especially the adjustable type.

DR. H. C. E. DONOVAN thanked Dr. Coghlan for his paper and especially for the concise indications given for the use of forceps. The horrible examples cited by him were rather

cases of bad midwifery than the use of improper forceps. He maintained that Kielland's forceps were not axis traction in type. The principle of axis traction depended on their accurately planned curves and their value depended on the fact that the application handles were free to move independently of the force applied into a position dependent on the resultant of the force applied and the resistance of the passages. With Kielland forceps he was afraid that the handles would take the position into which they were pulled by the operator. Their application appeared to present difficulties and the chief advantage claimed for them was their use in high cases and this was a rarely justifiable operation. The reversal in the uterus of the first blade would appear to be dangerous to both the child and the urethra and bladder of the woman. The rotation of occipito-posterior cases by means of the forceps was wrong. Manual rotation followed by forceps or the application of the forceps and allowing the head to turn spontaneously as it descended with the removal and reapplication of the forceps were better and safer treatment.

DR. A. J. GIBSON thanked Dr. Coghlan for his very interesting paper. He had hoped to see an actual demonstration of the Kielland forceps at the Women's Hospital, but during the last two months a suitable patient had not been available. A possible advantage of the Kielland forceps was in the simplicity of construction as there was practically no part which could get out of order as might happen in the Milne Murray axis-traction type. The only advantage in their use lay in the rotation of an arrested occipito-posterior position and personally before passing judgement on them, he would like to see them used in such a case. From what he had read, it seemed as if an episiotomy was often required if these forceps were used.

Dr. Coghlan replied thanking the members for the generous way that they had received and criticized his paper. He stated that, as in golf or anything else, one always did best with the implements to which one was used. The general trend of the criticism seemed to be that each man favoured the particular type of instrument to which he was used. In regard to the application of the forceps, in passing the first branch the blade was passed entirely above the plane of the brim, rotation of the narrow neck of the blade occurring between the fetal head and the symphysis. The blade itself projected prominently under the abdominal wall.

From a practical point of view the simplest instrument was the most useful. That was why of the classical types he preferred the Neville Barnes, as they were less complicated than the Milne Murray. The Kielland forceps were simpler still, but their application was certainly more difficult to learn, requiring the ability to diagnose accurately the position of the head which was gained only by one who had developed a sense of touch. Once mastered, like everything else, it became simple.

He had never seen any episiotomy done on account of the use of these forceps and considered it rarely necessary unless on the floating bed.

With regard to the dorsal position it was used universally everywhere except in England and Australia. Under an anæsthetic it did not matter to the patient what position she was in. In an ordinary clinical examination the patients did not mind the lithotomy position if it was insisted on and really it was the only position in which a thorough examination could be made.

A CLINICAL MEETING OF THE SECTION OF NEUROLOGY AND PSYCHIATRY of the New South Wales Branch of the British Medical Association was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on April 15, 1926, DR. CHISHOLM ROSS, the Chairman, in the chair.

#### Unilateral Pontine Syndrome.

DR. ALFRED W. CAMPBELL showed a man, fifty-four years of age, who had been suddenly seized four months previously with giddiness, palpitation and inability to swallow. Upon recovery from these alarming symptoms the following phenomena had been disclosed: Anæsthesia of the right

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side of the face (fifth nerve distribution and ascribed to involvement of fifth sensory nucleus); anaesthesia to pain and thermic sense of the left limbs and trunk (lateral lemniscus with spino-thalamic tract); incoordination and slight weakness of right arm and leg (cerebellar tracts); contraction of the right pupil (oculo-pupillary centre); palatal paralysis (glossopharyngeal nerve). All these signs persisted. Dr. Campbell thought that the responsible lesion might be a softening of the pons in that part supplied by the posterior inferior cerebellar artery.

#### Fibrillary Muscular Twitching.

Dr. Campbell also showed a man, forty-nine years of age, a woolsorter, who some two years previously had complained of general weakness and manifested a remarkable play of fibrillary contractions most obvious in the calf muscles and less distinct in the thigh and arms. Increased knee jerks had been the only other physical sign and the patient was not luetic. Progressive muscular atrophy had been diagnosed, but two years had passed and the affection was not progressing. Possibly therefore the case was one of cryptopathic fibrillary muscular contraction.

#### Thomsen's Disease.

To illustrate the Herculean type of Thomsen's disease, Dr. Campbell showed a man, thirty-four years of age. The patient had been shown at a meeting of the Branch nine years previously and remained in the same state as then seen. He presented a remarkable degree of muscularity, but his muscles though large were sluggish and lacked strength. The general muscular enlargement and the absence of atrophy distinguished the condition from pseudo-hypertrophic dystrophy.

PROFESSOR A. N. BURKITT suggested that the histological examination of muscle would help in the diagnosis of patients suffering from Thomsen's disease.

#### Ramisection.

DR. NORMAN ROYLE showed patients who had been operated upon by sympathetic ramisection and illustrated the improvement in the patients by means of a moving picture demonstration.

DR. R. A. NOBLE presented a patient whom he had formerly referred to Dr. Royle for ramisection. This girl, aged twenty-six years, had had an acute attack of "meningitis" eight years previously and within the previous twelve months had found more and more difficulty in writing.

On examination before operation the right arm and leg had been definitely spastic, but the left side of the body was scarcely affected at all. The patient improved under treatment with hyoscine, but it was felt that cervical ramisection would permanently remove the spasticity of the right arm and enable the patient to carry out her work with greater ease. Therefore Dr. Royle operated at Lewisham Hospital and the result was very successful. The girl was now able to write quite legibly without the further administration of any drug.

DR. J. BOSTOCK remarked that the first patient presented by Dr. Royle had formerly been under his care and he had used injections of 0.0006 gramme (one-hundredth of grain) of hyoscine. Considerable improvement had occurred for about one hour after each injection, but Dr. Royle's operation had given permanent results which were of the same nature as had been seen after the injections of hyoscine.

Dr. Royle said that he had found from experience that operations on patients with post-encephalitic rigidity simulating Parkinson's disease had been particularly successful, especially where there was not much tremor present.

#### A Study in Physical Signs.

DR. NOBLE presented three patients who were under treatment at the Psychiatric Clinic at the Lewisham Hospital to illustrate some physical signs which were similar and yet occurred in widely divergent conditions. The conditions manifested were: (i.) An organic condition, Friedreich's ataxia, (ii.) hysteria superimposed upon scoliosis, (iii.) malingering following an injury.

The first patient had been referred to hospital by Sir John Macpherson. She was a single girl of twenty-seven years who had complained of progressive loss of power of all four limbs for the previous ten years accompanied by ataxia. On examination the patient was unable to walk without assistance and the ataxia was very pronounced. The speech was slurring and indistinct. The deep reflexes were absent. The plantar reflexes were extensor. The pupils reacted to light, there was no nystagmus, the optic discs were normal and there was no loss of sensation to pain. There had always been some deformity of the feet. The family history as far as the patient knew did not reveal any evidence of mental or nervous disease, but Sir John Macpherson had ascertained from a relative that on the mother's side there were two cases of a somewhat similar disease, namely a male first cousin of the mother who was suffering from this condition, and an aunt of the mother who died of this disease.

The progress of the condition, physical signs and family history were all in accordance with a diagnosis of Friedreich's ataxia. The condition had to be differentiated from *tabes dorsalis*, disseminated sclerosis, hereditary cerebellar ataxia and hereditary spastic paraplegia. Dr. Noble drew attention to the points which ruled these diseases out of court.

The second patient had been referred by Dr. Norman Royle. She was a girl of twenty-six years who had been in bed for several months with a trained nurse in attendance. She had had a definite scoliosis of the spine since infancy. On admission to hospital she had been unable to feed herself or to stand without assistance. She manifested incoordination of movement and when attempts were made to force her to walk, she was ataxic and dragged her feet along the floor. She appeared on examination to resemble the former patient, but the usual signs of organic disease were absent. Her condition was one of hysteria superimposed upon the scoliosis. The girl found great comfort in her illness when at home, but on isolation in hospital and with reeducative treatment she very soon made a good recovery, was taking all her food and was walking about the hospital assisting with the ward duties.

The third patient was a male, aged thirty-five years, married, who had crushed his hand in a printing machine and was receiving compensation. He had been referred by Dr. H. R. G. Poate. On examination he appeared to be unable to feel a pin prick beyond the carpo-metacarpal joints of the left hand. There was considerable wasting of the fingers due to disuse and the patient carried his hand in a flexed attitude as if protecting it from injury. There was no evidence of any systematic involvement of sensory nerves and the condition in the fingers was due to disuse atrophy. The patient stated that he expected to receive compensation for several years to come and that this together with a private income which he enjoyed, was sufficient to keep him and his family.

#### Myasthenia Gravis.

Dr. Noble also showed a man of twenty-six years, suffering from *myasthenia gravis* in an early stage. He had until recently worked as a plumber. He had complained of "weakness in the joints" which prevented him from carrying out his work. On examination there was found weakness of all facial muscles and slight ptosis. The patient was unable to count beyond one hundred without considerable difficulty. The possibility of lead poisoning had been excluded.

#### Cases for Diagnosis.

DR. HARVEY SUTTON showed two school children for diagnosis and especially prognosis. He stated that in school the medical officer occasionally met with a child apparently suffering from acute chorea. He sent for the parent in order to explain the necessity of the child being kept at home in bed and learned from the parent that these facial and limb twitchings of a choreiform type had been existent for years. Though the irregular muscular movements were of the lightning like type and the child had the cheerful grin so typical of acute chorea, the parents assured him that the child had been in that condition from

an early age and that the movements had been present continuously without intermission or relapse. Further, no association with rheumatism or growing pains had been traced as in chorea. No heart lesion existed and the child was not at any time ill.

The mental attitude too was usually bright and alert and the child in spite of its handicap reached grade per age. All this was against the condition being one of acute chorea.

One striking feature was the emotional instability especially the tendency to meaningless laughter—the child might be at a meal with the family and suddenly laugh loudly, though nothing had happened and the child could not indicate any cause for its hilarity.

No history was available of any familial incidence. No others in the family and no relatives or ancestors appeared to have had any condition resembling it. Sometimes a history of difficult or of precipitate birth was given, the movements were noticed quite early in life and with them was a lack of coordination that delayed walking and speaking. But as against the feeble-minded types these children were able to do quite well at mental work.

The movements were exaggerated if attention were drawn to the child and absent during sleep. During school life the movements appeared to come more under control and the emotional condition to improve. The knee jerks might be exaggerated, but no *pes cavus* or true spasticity occurred. The heart was normal and the tonsils were healthy. As the condition resembled chorea, perhaps the designation of chronic chorea was justified, but it was certainly not associated with acute or Sydenham's chorea or with acute rheumatism. The absence of family incidence excluded Huntington's chorea. It had no association with mental defective types. Its prognosis appeared to be good and this would exclude progressive degenerative processes. The neurological signs excluded disturbances of the lower motor neurone. In cortical or subcortical lesions mental defect usually occurred and hemiplegia was more typical. The emotional characters suggested the region of the basal ganglia as the site of the lesion. Freud had described a condition called choreatic paresis, the after result of hemorrhage in the sublenticular region. Dr. Sutton suggested that this condition might be called the sublenticular syndrome and it might be regarded as a type of birth injury and of traumatic origin.

The histories of the patients were as follows:

J.H., a boy, aged nine years and nine months, had a mental age (Binet) of seven years and ten months, the intelligence quotient was 87. He had walked at fifteen months, had been late in talking and no abnormal movements were noted until the third year of life. No illnesses had occurred. He had been treated by a homeopathic practitioner for "infantile paralysis." Movements which greatly increased when notice was taken of him occurred and were choreic in type, even clonic spasm was noticed. Teachers considered him intelligent, smart at arithmetic, but not in reading and writing.

He had a cheerful grin and was somewhat emotionally unstable.

The knee jerks were exaggerated; slight ankle clonus was present. The vision in each eye was "6/9." The hearing was normal.

D.C., a boy, aged seven years and seven months, had a fairly normal intelligence. He was very shy, but was given to making grimaces. He was unusually emotional. He walked only fairly well owing to imperfect coordination and frequent irregular twitching of muscles.

Dr. Sutton said that both cases had been reported by Dr. S. Buckingham, school medical officer.

Dr. E. E. PITTMAN considered that those presented by Dr. Sutton were suffering from rheumatic chorea, he advised that these patients should be sent to the country.

PROFESSOR A. N. BURKITT reminded the members that similar patients had been under the care of the late Dr. Rennie in the wards of Royal Prince Alfred Hospital but he would never commit himself as to the diagnosis.

Dr. A. W. CAMPBELL considered that Dr. Harvey Sutton's cases were probably in the nature of a progressive lenticular degeneration.

Dr. L. BOND stated that he had seen similar cases which had not progressed at all and where the mental condition remained sound.

Dr. CHISHOLM ROSS considered that one of Dr. Harvey Sutton's cases was of the nature of Huntington's chorea.

#### Pregnancy in General Paralysis of the Insane.

Dr. S. MINOGUE reported two cases of pregnancy in women suffering from general paralysis of the insane.

Mrs. X., a *multipara* with seven children, had been admitted to the Mental Hospital, Gladesville, in March, 1925. She had been a typical clinical general paralytic. Her speech had been slow, slurring and difficult, her gait unsteady and feeble, her bodily condition was poor and mentally she had been euphoric, childish, facile and faulty in habits. Her serum had reacted to the Wassermann test. The disease had advanced quickly. Her speech had become more and more difficult and slurring and her feebleness steadily worse, so that she was soon confined to a chair. Her mental condition had rapidly deteriorated, soon merging into a state of profound dementia.

Three months after admission she had had a typical convulsive seizure and became comatose, a condition in which she remained for weeks. Twenty-six days after the seizure she had been delivered of a male child, weighing 1.8 kilograms (four pounds) and of from seven to eight months gestation. Delivery had been painless, precipitate, uneventful. After delivery the mother had not improved and she died in eleven days. The child had lived eight days. No *post mortem* examination was made.

The only parallel case Dr. Minogue could find in the records of the Gladesville Hospital was that of a *multipara* aged thirty-two years, with five children. She had been admitted to hospital in 1918 and had been regarded at the time as a true clinical general paralytic; although the proofs of her condition were somewhat inconclusive. She had been in a condition of profound mental confusion and her serum had yielded a reaction to the Wassermann test. She had rallied in six months and went out on leave. However, she had soon returned. Two hundred and thirty-five days from the day she first went out on leave she had been spontaneously delivered of a male child, weighing 1.8 kilograms (four pounds). Her subsequent history had been one of slowly advancing mental deterioration, coupled with slowly advancing bodily weakness and deterioration. She had died in 1924.

Pregnancy in women suffering from general paralysis of the insane was very rare. Susstrunk ("Epitome of Current Medical Literature," *The British Medical Journal*, September 19, 1925) had been able to find only sixty cases reported in the literature. The reasons for this rarity lay probably in the fact that general paralysis of the insane in women was uncommon, that it generally attacked women at or past the menopause and thirdly that if younger women were attacked there were abnormal changes in ovulation in from 20-40% of cases (Susstrunk).

In regard to treatment Susstrunk quoted the former doctrine that interference with the course of the pregnancy should not be carried out, because delivery was not followed by an improvement in the patient's condition. But he advocated in view of the success that had attended the malaria treatment of general paralytics that the pregnancy should be terminated and the patient treated with malaria.

#### MEDICO-POLITICAL.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held in the Medical Society Hall, East Melbourne, on July 7, 1926, Dr. H. DOUGLAS STEPHENS, the President, in the chair.

#### Scale of Fees for Pathological Work.

On behalf of Dr. C. H. MOLLISON, Dr. J. NEWMAN MORRIS moved the adoption of a scale of fees for pathological work. The table had been drawn up by a sub-committee consisting of Drs. C. H. Mollison, W. J. Penfold and Reginald Webster and had been approved by the Council. It was to be under-



stood that the fees in the scale were intended for the guidance of pathologists in private practice and that public and semi-public bodies were not necessarily bound by them.

Dr. A. L. KENNY seconded the motion which was carried unanimously. The scale of fees is as follows:

	£	s.	d.	£	s.	d.	
Swabs from nose and throat re diphtheria . . . . .	1	1	0				
Urinary examinations:							
General report—microscopical, chemical and bacteriological . .	1	1	0	to	3	3	0
Examinations of cerebro-spinal fluid:							
Cytological, including cell count	1	1	0	to	2	2	0
Bacteriological . . . . .	1	1	0	to	3	3	0
Pleural, peritoneal and pericardial effusions . . as for cerebro-spinal fluid.							
Pus, discharges from various sources:							
(i.) Where the infecting organism can be identified in a smear preparation, for example, gonococcus and tubercle bacillus . . . . .	1	1	0				
(ii.) Where cultural methods are necessary . . . . .	1	1	0	to	3	3	0
(iii.) Animal inoculation tests . .	3	3	0				
Examinations of sputum:							
(a) Identification of tubercle bacillus in smear . . . . .	1	1	0				
(b) Identification of tubercle bacillus by animal inoculation . .	3	3	0				
(c) Isolation of pneumococcus and determination of type . .	3	3	0	to	5	5	0
Agglutination tests . . . . .	1	1	0	to	5	5	0
Bacteriological examination of faeces	2	2	0	to	5	5	0
Hematology:							
Cytological examination of the blood . . . . .	1	1	0	to	3	3	0
Examination of compatibility for transfusion . . . . .	1	1	0	to	3	3	0
Determination of coagulation time . . . . .	1	1	0	to	2	2	0
Estimation of corpuscular fragility . . . . .	2	2	0	to	3	3	0
Blood culture . . . . .	2	2	0	to	4	4	0
Biochemical examinations of the blood:							
Estimation of blood urea . . . .	2	2	0	to	4	4	0
Blood sugar curve . . . . .	5	5	0	to	10	10	0
Single determination of blood sugar . . . . .	2	2	0	to	3	3	0
Van den Bergh tests . . . . .	1	1	0	to	3	3	0
Autogenous vaccines:							
(a) Where the vaccine is made from an organism present in pure culture and readily cultivated, for example, <i>Staphylococcus aureus</i> or <i>Bacillus coli</i> . . . . .	2	2	0				
(b) Where the preparation of the vaccine involves the isolation of two or more organisms in separate pure culture . . . .	3	3	0	to	5	5	0
Complement fixation tests (including Wassermann) . . . . .	2	2	0	to	4	4	0
Histological sections (including immediate section at operation) . .	1	1	0	to	5	5	0

#### Amendment of Rule.

Dr. J. NEWMAN MORRIS moved the following amendment of Rule 11 of the Victorian Branch:

That paragraphs 2 and 3 of Rule 11 be deleted and in their place inserted:

The members of each Subdivision shall appoint a Chairman and an Honorary Secretary who may or may not also act as Treasurer of the Subdivision.

All such appointments shall be reported to the Council of the Branch and shall be subject to the

approval of the Council. There shall be one meeting at least in each year prior to the 1st September for the purpose of electing one representative of that Subdivision to the Council of the Branch.

This meeting shall be summoned by the Secretary of the Subdivision at the request of the Council of the Branch.

The Melbourne Subdivision shall elect three representatives.

Should any Subdivision have failed to elect a member of the Council on or before 1st October, the Council at its next meeting shall elect a representative of that Subdivision provided he is a member of the aforesaid Subdivision.

In the event of a member ceasing practice he shall at his own option be an ordinary member of that Subdivision in which he is residing or in which he formerly practised.

Dr. Morris explained that the modification of the Rule was designed to prevent the anomaly by which a member who was likely to be elected to the Council as the representative of a particular subdivision should be nominated also among the candidates for election by the general body of members.

The motion, seconded by Dr. H. R. DEW, was carried.

#### NOMINATIONS AND ELECTIONS.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

- Evans, Cyril Harold Edward William, M.B., B.S., 1926 (Univ. Melbourne), 58, Alfred Street, Kew.  
 Davis, Roy Brasmere, M.B., B.S., 1926 (Univ. Melbourne), 8, Barkly Street, St. Kilda.  
 Nettleton, Roy, M.B., B.S., 1926 (Univ. Melbourne), 92, Maribyrnong Road, Moonee Ponds.  
 Smith, Julian Ormond, M.B., B.S., 1926 (Univ. Melbourne), 36, Powell Street, East Melbourne.  
 Syme, George Robin Adlington, M.B., B.S., 1926, (Univ. Melbourne), "Chesterfield," Mayfield Avenue, Malvern.  
 Knox, Robert Brodie, M.B., B.S., 1926 (Univ. Melbourne), Ormond College, Parkville.  
 Kaye, Geoffrey Alfred, M.B., B.S., 1926 (Univ. Melbourne), 449, St. Kilda Road, Melbourne.  
 Fitts, Clive Hamilton, M.B., B.S., 1926 (Univ. Melbourne), "Gainsborough," 602, St. Kilda Road, Melbourne.  
 Caldwell, Wallace Edwin, M.B., B.S., 1926 (Univ. Melbourne), 33, Myrtle Street, Clifton Hill.

The undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

- Belisario, John Colquhoun, M.B., Ch.M., 1926 (Univ. Sydney), 1, Manar Flats, Macleay Street, Potts Point.  
 Bray, George William, M.B., Ch.M., 1925 (Univ. Sydney), Government Hospital, Nauru, Central Pacific.  
 Carruthers, Bruce Maitland, M.B., 1915 (Univ. Sydney), 17, Spofforth Street, Cremorne.  
 Chambers, George Alexander, M.B., Ch.M., 1925 (Univ. Sydney), Laurel Avenue, Epping.  
 Cooper, Alfred Leonard, M.B., Ch.M., 1925 (Univ. Sydney), 22, Wolseley Road, Drummoyne.  
 Coyne, Francis Reynolds, M.B., Ch.M., 1925 (Univ. Sydney), Maroubra Bay Road, South Randwick.  
 Miller, Ian Douglas, M.B., 1924 (Univ. Sydney), 3, Burroway Street, Neutral Bay.  
 Street, Jack Blakely, M.B., Ch.M., 1926 (Univ. Sydney), "Merrimu," Gordon Road, Chatswood.  
 Wilson, Harold Frederick, M.B., Ch.M., 1925 (Univ. Sydney), Fairfax Road, Bellevue Hill.  
 Wilson, Milford Graham, M.B., Ch.M., 1926 (Univ. Sydney), "Loombra," Armidale, N.S.W.

Chipperfield, George Joseph, L.R.C.P., 1898 (Edinburgh), L.F.P.S., 1898 (Glasgow), L.R.C.S., 1898 (Edinburgh), Canowindra, N.S.W.  
 McKee, James Walter Stewart, M.B., 1913 (Univ. Sydney), Roseville.  
 Vance, Edmund Bruce Mortimer, M.B., 1911, Ch.M., 1921 (Univ. Sydney), 159, Macquarie Street, Sydney.  
 Earlam, Malcolm Sidney Stewart, M.B., Ch.M., 1924 (Univ. Sydney), City Road, Darlington.  
 Gribben, John, M.B., Ch.M., 1924 (Univ. Sydney), Tryon Road, Lindfield.  
 Hall, George Bruce, M.B., Ch.M., 1924 (Univ. Sydney), Cranbrook Road, Rose Bay.  
 Kite, Miles Gordon, M.B., 1925 (Univ. Sydney), Karralee, Kelso.  
 Moir, Alistair Edward Martin, M.B., Ch.M., 1926 (Univ. Sydney), Thargomindah, Queensland.  
 Oakeshott, John Bernard, M.B., Ch.M., 1925 (Univ. Sydney), Arnold Crescent, Killara.  
 Playoust, Gabrielle Blanche, M.B., Ch.M., 1926 (Univ. Sydney), "Woodside," Boulevard, Strathfield.  
 Sinclair, Bruce Arran, M.B., Ch.M., 1925 (Univ. Sydney), 81, Railway Street, Rockdale, N.S.W.  
 Smith, Alan Victor, M.B., 1924 (Univ. Sydney), Weston, N.S.W.

## ANNUAL MEETING.

At the annual meeting of the Western Australian Branch of the British Medical Association held on March 21, 1926 (see THE MEDICAL JOURNAL OF AUSTRALIA, June 19, 1926, pages 710 and 711), Dr. D. D. Paton, the Honorary Treasurer, presented the annual financial statement. The

statement is now reproduced. It is pointed out that the proportion of the subscriptions of members remitted in accordance with the Articles and By-laws to the head office of the British Medical Association, namely £228 2s., was not sent until after the close of the year 1925. The credit balance at the Western Australian Bank was in consequence larger by this amount at the time of the annual meeting than it would have been, had this payment been made within the financial year.

## Medical Societies.

## THE MELBOURNE HOSPITAL CLINICAL SOCIETY.

A MEETING OF THE MELBOURNE HOSPITAL CLINICAL SOCIETY was held at the Melbourne Hospital on June 25, 1926, Mr. ALAN NEWTON in the chair.

## Gumma of the Clavicle.

MR. ALAN NEWTON showed a male patient, aged fifty-four years, complaining for the last four months of a swelling in the shaft of the right clavicle which had gradually been increasing in size. There had been practically no pain and in the last few weeks the skin over the surface of the swelling had become red. For the past eight years the patient had not been walking well. On examination there was a swelling about the size of a plum over the outer third of the right clavicle. The mass was red and fluctuant, it was definitely associated with the bone and the skin over it was thinned. The patient had a spastic gait, increased deep reflexes in the lower limbs and absent superficial abdominal reflexes. The response

## WESTERN AUSTRALIAN DIVISION-BRANCH.

## FINANCIAL STATEMENT.

## Statement of Receipts and Payments during the Year 1925.

Dr.				Cr.
	RECEIPTS.	£	s.	d.
Balance in Hand at December 31, 1924 .. ..		1,357	2	6
Subscriptions and Capitation Fee—				
Subscriptions .. .. .	£647 12 0			
Capitation Fee .. .. .	0 12 0			
	52 1 0			
		700	5	0
Interest on War Bonds .. .. .		80	0	0
From Dinner Fund .. .. .		0	10	6
		£2,137	18	0
	PAYMENTS.	£	s.	d.
Secretarial Expenses—				
Printing .. .. .		18	7	0
Postage .. .. .		28	17	10
Clerical Aid (Assistant Secretary) .. ..		50	0	0
Payments not included in the above—				
British Medical Association .. .. .		7	13	1
THE MEDICAL JOURNAL OF AUSTRALIA .. ..		160	0	0
Federal Committee .. .. .		18	8	0
Reporter .. .. .		6	11	0
Legal Expenses .. .. .		14	14	0
Perth Hospital Board .. .. .		4	4	0
Perth Hospital Attendant .. .. .		4	4	0
Funds on December 31, 1925—				
Commonwealth Treasury Bond .. .. .	£896 17 0			
Western Australian Govern- ment Bonds .. .. .	200 0 0			
Fixed Deposit, Western Aus- tralian Bank .. .. .	325 0 0			
Australasian Medical Publish- ing Company, Ltd., Debenture .. .. .	100 0 0			
Current Account, Western Australian Bank .. .. .	303 2 1			
		1,824	19	1
		£2,137	18	0

We hereby certify that this Statement of Receipts and Expenditure has been audited and found correct.

(Signed)

ALLAN E. RANDELL,  
G. C. DEAN,  
Honorary Auditors.

D. D. PATON,  
Honorary Treasurer.

to the Wassermann test was strongly positive. X ray examination revealed considerable thickening of the bone with areas of increased density and rarefaction. Mr. Newton regarded the condition as being a gumma of the clavicle with syphilitic changes in the spinal cord and asked the opinion of the meeting as to the advisability of giving "Salvarsan."

Dr. S. V. SEWELL was strongly of the opinion that "Salvarsan" should be given, starting with a dose of 0.2 gramme and giving the second dose ten days later, accompanied by lumbar puncture and the injection of ten cubic centimetres of 1.25% saline solution into the theca.

#### Disseminated Sclerosis.

Dr. S. V. SEWELL showed a male patient, aged thirty-two years, complaining for the last three months of spasticity in the lower limbs which became more pronounced as the day progressed. Four years previously he had noticed a transitory weakness of the right arm and diplopia accompanying what was thought to be an attack of influenza. There was a girdle sensation and sense of discomfort at the level of the ninth dorsal segment. Lately he had noticed some precipitancy of micturition. On examination the deep reflexes in the lower limbs were increased, the plantar reflex on the right side was extensor and that on the left was indefinite. The cranial nerves and upper limbs were quite normal and there was no loss of sensation. The cerebro-spinal fluid was normal. "Lipiodol" had been injected and subsequent X ray examination had shown that the drug had sunk right to the bottom of the theca. Dr. Sewell expressed the opinion that the condition was probably one of disseminated sclerosis, but a tumour not yet causing complete blockage of the theca was still a possibility.

#### Hydrarthrosis of Knee, Possibly Tuberculous.

Dr. S. O. COWEN showed a male patient aged twenty-six years, complaining of cough for the last eighteen months. Nine weeks previously he had had influenza and both knee joints had become swollen, painful and stiff. The left knee had rapidly subsided, but the right remained swollen. The lungs manifested signs of consolidation at the right apex and at both bases. The signs in the chest rapidly had cleared up, except those at the right apex which remained. The right limb had been put up in extension by the Hamilton Russell method, a weight of 0.9 kilogram (two pounds) being used. The swelling of the right knee had rapidly subsided, but there was still some tenderness and thickening of the soft tissues on the inner aspect of the joint. An examination of the larynx revealed early tuberculous changes and X ray examination of both knees revealed no abnormality. The sputum had been examined several times for tubercle bacilli, but none had been found. Dr. Cowen said that in spite of the failure to find tubercle bacilli in the sputum, he had little doubt that the lungs were tuberculous. He asked for an expression of opinion as to whether the joint condition was tuberculous or due to the influenza.

Dr. S. V. SEWELL said that he had seen a similar case during the recent influenza epidemic. A patient with tuberculous disease of the lungs had rapidly developed effusions into the right shoulder and left knee joints which soon subsided. He had at first regarded the condition as being tuberculous, but in view of the rapid subsidence, was inclined to think that it was the result of a mixed infection.

MR. HAROLD DEW mentioned the toxic arthritis sometimes seen in dysentery, when no organisms were found on culture and thought that Dr. Cowen's case might represent a similar condition occurring in influenza.

Dr. DOUGLAS THOMAS said that recurrent hydrarthroses occasionally occurred in tuberculous infections. He instanced a patient with recurrent effusions over a period of twelve years in which Bazin's disease had subsequently developed.

#### Progressive Muscular Atrophy.

Dr. DOUGLAS THOMAS showed a male patient, aged fifty-two years, complaining of weakness in both hands for the previous seven months. He had had a penile sore twenty

years previously for which he received no treatment. Twelve months previously a bucket of cement had fallen on his neck, but as far as could be ascertained caused no serious injury. He was a moderate drinker. Seven months previously weakness had rapidly developed in both hands particularly the right and at the same time there had been some numbness and tingling which had been more pronounced in the left hand. Lately the paresis in both hands had gradually increased. There was also a history of fibrillary twitching in the small muscles of the hands, but this had never been actually observed. On examination there was definite wasting of the thenar and hypothenar eminences and the interosseous spaces in both hands, particularly the right. There was weakness of the interossei and lumbrical muscles and the hand grip was very poor on both sides. All the muscles of the right hand supplied by the median and ulnar nerves gave the reaction of degeneration and the muscles of the left hand supplied by the same nerves manifested diminished response to the faradic current. The biceps, triceps and supinator jerks were present on both sides, but were more active on the left. The knee jerks and ankle jerks were present and equal on both sides and the plantar reflexes were both flexor. The eye reflexes and cranial nerves were all normal and no loss of sensation could be detected. X ray examination of the cervical spine yielded no abnormality and there was no response to the Wassermann test. Dr. Thomas considered the condition as being probably one of progressive muscular atrophy, but thought that peripheral neuritis with involvement of the proprioceptive nerves could not be excluded.

#### Gumma of the Liver.

Dr. M. E. PLAYLE read the notes of Dr. Thomas's second patient, a female, aged thirty-five, who had first been seen on May 13, 1926. She had then complained that she had had indigestion for the previous twelve months with pain coming on about half an hour after meals. She had also noticed during the last month a lump in the left hypochondrium which had been gradually increasing in size. She had lost 2.2 kilograms (five pounds) in weight in the last six months. The bowels were constipated, but there were no urinary symptoms. The last menstrual period had occurred two weeks after the expected time, since when there had been a brownish discharge. On examination nothing abnormal had been found in the heart and lungs. The skin of the abdominal wall was very lax and in the left hypochondrium there was a hard round tumour about the size of a hen egg, not attached to the abdominal wall and moving well with respiration. The liver was slightly enlarged and contained a large Riedel's lobe. The urine was clear, the eye reflexes normal and the knee jerks equal and active. The Casoni and complement fixation tests for hydatid disease had yielded no reaction. The bismuth meal revealed nothing beyond forty-eight hours colonic stasis. The uterus was soft and antverted. The result of the Wassermann test was strongly positive. X ray examination of the urinary tract showed the kidney shadows to be normal in shape and the left kidney in a state of ptosis with a rounded shadow overlying its upper pole. The levulose test for liver function revealed a maximum rise of 0.027. On May 25, 1926, the patient had been put on 0.3 gramme (five grains) of potassium iodide three times a day and on May 28, 1926, she had felt much better and the mass was definitely smaller and irregular. The iodide had been increased to 1.2 gramme (twenty grains) and the mass had almost disappeared. On June 18, 1926, it had been noticed that the paraumbilical veins were enlarged and that slight ascites was present. Dr. Thomas regarded the mass as a gumma and asked whether in view of the normal result of the levulose test it would be wise to give "Salvarsan."

Dr. S. O. COWEN advised a short course of iodides followed by "Salvarsan" given with sodium thio-sulphate.

Dr. W. W. S. JOHNSTON had seen a similar case with normal result from a levulose test. He had given "Salvarsan" with definite benefit.

Dr. L. E. HURLEY said that he had under treatment a patient with a gumma of the liver, the onset had been acute simulating an acute inflammation of the abdomen.



He had been given three courses of "Salvarsan" and after the last course had developed severe jaundice which had cleared up on injections of sodium thio-sulphate.

#### Malignant Mass in the Pelvis.

DR. C. H. KELLAWAY showed a male patient, aged sixty-six years. Eleven months previously he had slipped in the street and immediately after had noticed a sharp pain in the right groin which radiated to the back of the thigh. Following this he had noticed some stiffness in the right hip and was in bed for several weeks. The pain had then gradually eased and he went back to work, although the hip was still stiff. During his stay in bed he had lost 9.9 kilograms (twenty-two pounds) in weight. Ten weeks previously he had again jarred the hip and again noticed severe stabbing pain of an intermittent character in the right groin and down the back of the thigh to the calf of the leg. The hip joint had become almost immobile and he was again confined to bed. After some weeks he had been able to get about on crutches. There had been no shivers or sweats, no cough and no pain elsewhere. On examination there was in the right side of the pelvis a large hard mass not tender and fixed to surrounding structures. The glands in the right groin were enlarged, hard and fixed, while those on the left side were only slightly enlarged. Further examination of the abdomen revealed no abnormality. Movements of the right hip joint were restricted and painful in all directions. The right trochanter was tender and raised above Nélaton's line. No shortening of the femur was detected. Rectal examination revealed a large hard mass in the right side of the pelvis fixed to the ileum. The prostate was hard and slightly nodular and the mucous membrane of the rectum moved freely over it. The hydatid and Wassermann tests yielded no reactions and X ray examination revealed irregular absorption of the posterior portion of the acetabulum. Dr. Kellaway thought the mass to be malignant, although it was not usual for a malignant tumour to cause erosion of cartilage. He was of the opinion that the patient should be explored.

#### Multiple Bone Abscesses.

MR. B. T. ZWAR showed a male patient, aged thirty-six years, who during the previous fourteen years had been intermittently suffering from bone abscesses. The first abscess had appeared in 1912 in the left humerus and had healed after the discharge of sequestra. From that time until his admission on April 28, 1926, numerous bone abscesses had developed, notwithstanding treatment with vaccines and colloidal preparations and the removal of septic foci. The patient would frequently notice a slight swelling over some bone, not associated with any pain or tenderness and some considerable time afterwards an abscess would develop especially if through some mild infection there was some lowering of resistance. On every occasion when the pus had been examined, *Staphylococcus albus* had been found and the same organism had been recovered from the urine. The patient had been admitted to hospital on April 28, 1926, complaining for five days of severe headache in the frontal and right temporal regions, accompanied by local tenderness. Two days after the onset he had developed projectile vomiting irrespective of food and with no preceding nausea. His temperature had been 37.8° C. (100° F.), the pulse rate 88 and the respiration rate 20. Definite exophthalmos had been present. The neck muscles were rigid, but Kernig's sign had not been elicited. There had been slight paresis of the right facial nerve, the deep reflexes in the left lower limb were more active than in the right and the left superficial abdominal reflex was less active than the right. The left plantar reflex had been equivocal. There had been some fullness of the veins in both fundi. The leucocyte count had been 13,000 per cubic millimetre. The cerebro-spinal fluid had been under increased pressure, the globulin had been increased, there had been six hundred cells per cubic millimetre and the stained film had contained numerous polymorphonuclear cells and staphylococci. The Wassermann test had yielded no reaction and on X ray examination of the skull nothing abnormal had been found. On May 2, 1926, the late Dr. Frank Andrew had reported suppurative sphenoiditis and redness of the right tympanic membrane

and on May 7, 1926, there was a free discharge of pus from the right ear with relief of headache. On May 23, 1926, the patient had complained of severe pain in the left thigh and X ray examination revealed a sequestrum which was removed. The temperature was still raised and the leucocyte count 15,000.

DR. S. V. SEWELL thought that transfusion from an individual who had been inoculated with the causative organism, might be of benefit. He also mentioned the good results he had obtained in blood infections from the intravenous injection of "Mercurochrome."

MR. C. LITTLEJOHN said that he had a similar patient under treatment. He had tried "Mercurochrome" but the result was not beneficial.

#### König's Disease (Osteo-Chondritis Desiccans).

MR. C. LITTLEJOHN presented the history of a boy, aged twelve years, who had for some time been complaining of tiredness in the left knee on exertion. There was no history of trauma. On examination the movements were quite free, but there was slight fullness in the joint. X ray examination revealed a small area of rarefaction in the internal condyle of the femur surrounded by sclerosis and surrounding a small sequestrum. A further X ray examination a few weeks later had revealed a lifting of the lateral margin of the sequestrum. At this stage the joint had been explored, as it was feared that the sequestrum might separate and form a loose body. On opening the joint the cartilage had been intact, but there was slight oedema over the site of the sequestrum. The joint had been closed, the wound healed rapidly and the boy had then worn a knee cage for five months. The joint was quite free from symptoms and X ray and clinical examination revealed no abnormality. Mr. Littlejohn pointed out that he could find no record of a case explored as early as this one had been, all the others having been explored when the body was either loosely attached *in situ*, attached by a pedicle or free in the joint. König had first described the condition in 1866 as *osteochondritis desiccans*, a type of osteochondritis associated with the formation of loose bodies in the joint. The loose bodies came almost invariably from the lateral aspect of the internal condyle not far from the attachment of the posterior crucial ligament. The loose bodies might be completely covered with cartilage, might increase in size and the trough from which they arose, might be coated with cartilage. The detached portion formed a loose body and osteo-arthritis followed as a result of repeated joint traumata consequent on its presence. The loose or sometimes pedunculated body might be completely covered with cartilage or might be osseous on one side. The pit of origin might also become covered with cartilage. Many theories had been advanced with regard to the causation of the condition. Jones considered that injury to the cartilage was the primary cause. Ludloff and Freiberg maintained that direct trauma, due to the impact of the condyle on the tibial spine was the cause, although attempts to produce the condition in animals by trauma had failed. Bath held that a pull on the crucial ligament pulled the piece off. Mr. Littlejohn regarded the condition as being related to the osteochondritides; his patient had also manifested Osgood-Schlatter disease or osteo-chondritis of the tibial spine.

MR. C. H. C. SEARBY said that he failed to see how the condition was related to osteo-chondritis. In all the cases he had seen described the sequestrum had cartilage on its joint surface only, the deeper surface either being free or united to the condyle by granulation tissue.

DR. L. E. HURLEY said that he had seen a similar case in which there had been a definite history of trauma. The first X ray examination had shown the sequestrum occupying the pit in the internal condyle, but a subsequent photograph had revealed the sequestrum in the suprapatellar bursa. The joint had been rested in the extended position for two months and had given no further trouble.

#### Intradural Abscess Following Fractured Skull.

MR. W. A. HAILES showed a male patient, aged sixteen years, who had been in the Melbourne Hospital seven weeks previously, suffering from a fractured skull. At that time

he had had slight concussion from which he soon recovered and X ray examination showed a fracture of the vault of the skull on the right side, running to the base in the region of the orbital fossa. He had remained well till twenty-four hours before his readmission on June 3, 1926. He had then noticed right-sided headache and vomiting, both of which had persisted. The temperature on admission had been  $37.1^{\circ}\text{C}$ . ( $98.8^{\circ}\text{F}$ .), the pulse rate 106 and the respiration rate 24. The pupils had been equal and reacted well to light and accommodation, the tongue moist and clean. The pulse was regular and of good volume, the systolic blood pressure was 125 millimetres and the diastolic 80 millimetres of mercury. The urine had a specific gravity of 1.040, was acid and contained no albumin or sugar. The heart, lungs and abdomen had been normal. There had been no loss of power and the deep reflexes had all been equal and active. The plantar reflexes had been flexor and the superficial abdominal reflexes were equal and active, although the left tired more readily than the right. There had been slight neck rigidity, but the cranial nerves were all normal. On June 3, 1926, lumbar puncture had been performed. The fluid had not been under increased pressure and contained a few cells 60% of which were lymphocytes and the remainder polymorphonuclear cells. On culture there had been no growth. On June 6, 1926, the cerebro-spinal fluid had contained seventy-four cells per cubic millimetre, both lymphocytes and polymorphonuclear cells being present. Headache and vomiting had still been present. The patient had been submitted to operation, a flap being turned down and a trephine opening made and enlarged down to the base of the anterior fossa of the skull. The dura had appeared injected and on opening it the brain substance had become herniated. No abscess or adhesions had been evident. The frontal lobe had been elevated with a retractor and creamy pus had escaped from the floor of the anterior fossa, where the fracture apparently opened into the anterior ethmoid air cells. A glove drain had been brought out through the base of the flap and the flap closed. The glove drain had been removed after two days and the sinus kept patent with forceps. Three weeks later the patient had been discharged to a convalescent home.

## Correspondence.

### "A NEW DEFINITION OF NORMAL LABOUR."

SIR: I was very much interested by Dr. De Garis's suggestive article on a new definition of normal labour, but I would like to draw her attention to one great factor in labour which she does not mention, that is the nervous system.

Pain is a relative symptom, more acutely felt the more highly organized the individual. What is agony to a civilized woman may be only discomfort to a savage; but unfortunately so few records of obstetric cases among savage women are available. We have even biblical testimony to the excessive pain of child bearing, so it is not a modern development.

I quite agree with Dr. De Garis that the *os uteri* and vaginal walls offer the greatest resistance to the progress of a normal labour. All sphincter muscles tend to contract when pressure is put upon them. This reflex is apparently exaggerated in the majority of civilized women and therefore the uterus has to contract more forcibly to overcome the spasm, hence the pain.

In my experience the only way of overcoming this resistance is by cutting out the higher centres by general anaesthesia or narcosis. I find that morphine-scopolamine narcosis markedly accelerates the first stage of labour, by lengthening the interval between contractions. I have seen a few, a very few, normal cases which approached the standard fixed by Dr. De Garis, but strangely enough amongst albuminurics this easy labour is fairly frequent, the first stage being quick and painless, the second also quick but more or less painful. As a paraplegic woman

also has a painless labour, the toxæmia due to the kidney condition must affect the sensory impulses passing to the spinal cord. These cases, however, could never be called normal. Cases of extreme inertia are rare, but I have seen a few cases resembling the one quoted by Dr. De Garis when manual dilatation became necessary and was attended by bleeding. In all my cases there was a low insertion of the placenta, sometimes the dilatation was so remarkably easy as to suggest paralysis of the muscles of the cervix and lower segment. Apparently even a marginal *placenta prævia* can seriously affect the powers of contraction and retraction of the lower segment and cervix. Attention to general health and diet is of course most important. But why limit this attention to the mother. If both sexes are scientifically dieted from birth and individual deficiencies supplied, it would take four or five generations to test the efficacy of this treatment of uterine inertia. Even then the effects of centuries of bad feeding behind us might not be totally eradicated. In the meantime it seems only humane to treat the "pathological" symptom of pain. I only hope with Dr. De Garis that Victorian practitioners will be stimulated by her suggestions to restore labour to its position as a natural physiological function.

Yours, etc.,

EDWARD B. HEFFERNAN.

Melbourne,  
July 12, 1926.

### OCCIPITO-POSTERIOR POSITIONS.

SIR: I was very interested to read Dr. Alfred J. Gibson's paper on occipito-posterior positions and the discussion that followed. As they are such a frequent and serious complication of labour it is necessary that it should be possible to make the diagnosis with certainty and adopt a line of treatment which will result in the birth of a living child with the minimum of trauma to itself and the mother.

Presuming that labour has been in progress some time and the medical attendant discovers that the occiput is in a posterior position, should he adopt an expectant treatment or change the occiput to an anterior position as soon as possible?

With proper judgement which comes only with experience in these cases, one may leave a small percentage in the confident belief that the head will rotate favourably, but the majority will not do so and it is my opinion that the correct treatment in nearly every case is to rotate the occiput to an anterior position as soon as possible.

Now manual rotation would be the ideal method were it as easy as the textbooks would have us believe, but it is by no means an easy manœuvre in most cases and one can recall occasions when a colleague has taken the best part of an hour in endeavouring to manually rotate and not always with success. The complaint generally is that the occiput can be turned to an anterior position, but that it slips back into a posterior one. To get over this difficulty one is advised to insert the hand well into the uterus and push the posterior shoulder past the promontory of the sacrum thus ensuring that the back becomes anterior and the occiput will not slip back. Now I maintain that this is a more difficult operation than turning by forceps (Scanlon's manœuvre) and more likely to cause damage to the child and mother. Dr. Gibson describes the method of turning by forceps, but he states that he has never tried it and finally condemns it. It seems to me that it is neither fair nor logical to pass judgement thus without a trial. Even when the old straight forceps or the Kielland type are used, he damns the method with faint praise. Dr. Donovan calmly asks the section (Gynecology and Obstetrics) to unreservedly condemn the method. I have heard him condemn it before, but have been left quite unmoved.

I have used this method for the past fourteen years, having first read William's lucid description in his well-known textbook. Using the ordinary forceps—not the axis-

traction model—the head is gently pushed up the pelvic brim. This is a most important step and I believe that it is due to its omission that the method has been so criticized. Having disengaged the head it is remarkable how easily and gently it may be rotated into an occipito-anterior position—from R.O.P. to R.O.A., from L.O.P. to L.O.A. The head is now pulled down sufficiently to engage and the forceps which have become reversed are removed and reapplied correctly. The position being an occipito-anterior one, all is now "plain sailing."

Williams states that since using this method occipito-posterior positions have lost their terrors for him and in my humble way I can corroborate this to the full. I have never seen the slightest damage to mother or child with this method and, knowing the ease and gentleness with which it can be done, it is difficult for me to imagine how any damage can occur.

I must apologize for taking up so much space, but the importance of the subject must be my excuse. I have had more than a fair share of occipito-posterior positions and can speak from experience in defending and recommending a method which, so far from being dangerous and deserving of condemnation (made so often without trial), I look upon as the most useful manœuvre I have learnt in the conduct of obstetric cases since I have been in practice.

Yours, etc.,

JAMES C. HUGHES, M.B., Ch.M. (Syd.).

"Kimmerrie," Lang Road,  
Centennial Park, Sydney,  
June 30, 1926.

#### SO-CALLED SEPTIC TONSILS.

SIR: I have read Dr. Murphy's letter on the abuse of tonsillectomy with considerable interest, as the subject of septic and diseased tonsils is one that has interested me for some years, therefore I shall feel very much obliged if Dr. Murphy or any of his colleagues and throat specialists would define clearly and describe what they mean by diseased or septic tonsils. Every winter I see a few cases from Sydney and Melbourne, some of whom have a cough said to be due to septic tonsils; at least that was the diagnosis given by southern specialists who advised immediate tonsillectomy, failing which dire consequences would accrue—heart disease, toxæmia *et cetera*. I do not doubt for a moment that cardiac trouble of a serious kind may follow obvious disease of the tonsils, but the casual way in which this disease of the tonsils is diagnosed by the very best specialists, makes me wonder. In some of those so-called septic cases I have been able after great difficulty to express a small bead of discharge which occasionally after a very careful search under the microscope gave evidence of a leucocyte or two and in others even those could not be found and to all appearances the "guilty" tonsils seemed normal. Taking these cases as typical examples of septic disease, I feel sure I am not exaggerating when I say nearly every adult over thirty-five in this town is affected. But are those cases already referred to really suffering from septic tonsils?

Awaiting a clear, scientific definition of what is meant by the expression from Dr. Murphy or any of his colleagues.

Yours, etc.

A. STEWART.

T. & G. Buildings,  
Queen Street, Brisbane,  
July 19, 1926.

#### Congress Notes.

THE AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

THE Executive Committee of the second session of the Australasian Medical Congress (British Medical Association), Dunedin, 1927, desires to receive applications for

membership at the earliest moment, in order that the work of preparation may be completed in due course. It is hoped that the attendance will be large.

#### Accommodation in Dunedin.

As the hotel and boarding house accommodation in Dunedin is limited, the Executive Committee has made special arrangements with certain of the residential colleges to receive members of Congress. These arrangements, however, are contingent upon a certain guaranteed number of rooms being engaged. Members who propose to take advantage of these convenient arrangements, are therefore requested to apply for rooms as early as possible. The applications should be addressed to Dr. Russell Ritchie, George Street, Dunedin. The tariff will be six guineas for the period from the evening of February 1 to the morning of February 10, 1927, inclusive of lunch or five guineas without lunch. No reduction for a shorter period will be made.

Other accommodation is obtainable at hotels and boarding houses.

#### Hotels.

Grand Hotel.—Tariff from one pound *per diem*.

Excelsior Hotel.—Tariff from one pound *per diem*.

Wain's Hotel.—Tariff one pound *per diem*.

City Hotel.—Tariff eighteen shillings to one pound for single rooms and eighteen shillings *per person per diem* for double rooms.

Oban Hotel.—Tariff eighteen shillings *per diem*. The majority of the rooms are double.

Criterion Hotel.—Tariff fifteen shillings *per diem*.

#### Boarding Houses.

Onslow House, Queens Drive (about two miles on the tram car route from Dunedin).—Tariff twelve shillings and sixpence and fifteen shillings *per diem*.

Leith House, George Street (about one mile from the University where Congress will be held).—Tariff ten shillings *per diem*.

Ballymena House, High Street.—Tariff ten shillings *per diem*.

Applications for rooms at hotels or boarding houses should be made to the manager of the selected establishment.

#### Proceedings of the Australian Medical Boards.

#### VICTORIA.

The undermentioned have been registered under the provisions of Part I. of *The Medical Act, 1915*, as duly qualified medical practitioners:

Murray, Archibald Warden Graves, M.B., Ch.M., 1915 (Univ. Sydney), Colac.

Allan, Raymond Tennyson, M.B., B.S., 1926 (Univ. Melbourne), 70, Mimosa Road, Caulfield.

Begg, John Daniel, M.B., B.S., 1926 (Univ. Melbourne), 124, Power Street, Hawthorn.

Boyt, Reginald Henry, M.B., B.S., 1926 (Univ. Melbourne), High Street, Glen Iris.

Brady, Wilfred Arthur, M.B., B.S., 1926 (Univ. Melbourne), 1, Esplanade, St. Kilda.

Caldwell, Wallace Edwin, M.B., B.S., 1926 (Univ. Melbourne), 33, Myrtle Street, Clifton Hill.

Coffey, Frank Frederick, M.B., B.S., 1926 (Univ. Melbourne), 105, Stanhope Street, Malvern.

Considine, Henry Lockington, M.B., B.S., 1926 (Univ. Melbourne), 10, Crewe Road, Oakleigh.

Cook, James Wilson, M.B., B.S., 1926 (Univ. Melbourne), 117, Carpenter Street, Bendigo.

Counsell, Walter Duff, M.B., B.S., 1926 (Univ. Melbourne), Tungamah.



- Crisp, Ernest Reginald, M.B., B.S., 1926 (Univ. Melbourne), "Tosari," Powell Street, Killara, New South Wales.
- Dahlenburg, Elgin Gustav, M.B., B.S., 1926 (Univ. Melbourne), Kiata.
- Davis, Roy Brasmere, M.B., B.S., 1926 (Univ. Melbourne), 8, Barkly Street, St. Kilda.
- Davis, Wolfe, M.B., B.S., 1926 (Univ. Melbourne), 147, Brighton Road, St. Kilda.
- Deane, Maslem MacKenzie, M.B., B.S., 1926 (Univ. Melbourne), 3, Quat Quatta Avenue, Elsternwick.
- Downes, Henry Erskine, M.B., B.S., 1926 (Univ. Melbourne), 51, Murray Street, Prahran.
- Duffy, Charles Allan Gavan, M.B., B.S., 1926 (Univ. Melbourne), 24, Park Street, South Yarra.
- Evans, Cyril Harold Edward William, M.B., B.S., 1926 (Univ. Melbourne), 58, Alfred Street, Kew.
- Fenton, Frederick George, M.B., B.S. (1926), (Univ. Melbourne), National Bank, St. Kilda.
- Fitts, Clive Hamilton, M.B., B.S., 1926 (Univ. Melbourne), "Gainsborough," 602, St. Kilda Road, Melbourne.
- Foley, Francis John, M.B., B.S., 1926 (Univ. Melbourne), 282, Orrong Road, Caulfield.
- Hallowes, Herbert Francis Chaworth, M.B., B.S., 1926 (Univ. Melbourne), c/o Dr. Brown, Atkinson Street, Oakleigh.
- Ham, Hendry James Perry, M.B., B.S., 1926 (Univ. Melbourne), 366, Church Street, Richmond.
- Hamilton, James Joseph, M.B., B.S., 1926 (Univ. Melbourne), Kilmore.
- Henderson, Austin Quirk, M.B., B.S., 1926 (Univ. Melbourne), 75, Tooronga Road, East Malvern.
- Johnson, Vincent Phillip, M.B., B.S., 1926 (Univ. Melbourne), 65, Neill Street, Middle Park.
- Joyce, John Colin Ramsay, M.B., B.S., 1926 (Univ. Melbourne), "Redholme," Moorabbin.
- Kaye, Geoffrey Alfred, M.B., B.S., 1926 (Univ. Melbourne), 449, St. Kilda Road, Melbourne.
- Kennedy, Patrick, Adrian Cattanaeh, M.B., B.S., 1926 (Univ. Melbourne), Cobram.
- Knox, Robert Brodie, M.B., B.S., 1926 (Univ. Melbourne), Ormond College, Parkville.
- Le Souef, Ian Albert Malet, M.B., B.S., 1926 (Univ. Melbourne), 52, Central Park Road, East Malvern.
- Long, Robert Jeffrey, M.B., B.S., 1926 (Univ. Melbourne), 69, Balwyn Road, Canterbury.
- Love, Harold Russell, M.B., B.S., 1926 (Univ. Melbourne), 16, Maud Street, Kew.
- Middleton, Frederick Charles, M.B., B.S., 1926 (Univ. Melbourne), 567, Nicholson Street, North Carlton.
- Mitchell, Douglas Harold, M.B., B.S., 1926 (Univ. Melbourne), Queen's College, Carlton.
- Moreton, Arthur Roberts, M.B., B.S., 1926 (Univ. Melbourne), 6, Ryrie Street, Geelong.
- McLean, John Angus, M.B., B.S., 1926 (Univ. Melbourne), 17, Iona Street, Black Rock.
- Nettleton, Roy, M.B., B.S., 1926 (Univ. Melbourne), 92, Maribyrnong Road, Moonee Ponds.
- O'Collins, Joseph Bernard, M.B., B.S., 1926 (Univ. Melbourne), 40, Beaconsfield Parade, Albert Park.
- O'Hara, Alice, M.B., B.S., 1926 (Univ. Melbourne), 180, Park Street, South Melbourne.
- Penington, Raymond George, M.B., B.S., 1926 (Univ. Melbourne), 11, Victoria Crescent, Mont Albert.
- Powell, Mostyn Levi, M.B., B.S., 1926 (Univ. Melbourne), 1, Princess Avenue, Caulfield.
- Prouse, Charles Henry, M.B., B.S., 1926 (Univ. Melbourne), 144, Albert Street, Windsor.
- Robinson, Hubert Edwards, M.B., B.S., 1926 (Univ. Melbourne), 165, Glenhuntly Road, Elwood.
- Robinson, Mervyn Henry Bowzer, M.B., B.S., 1926 (Univ. Melbourne), 5, Wilnot Street, East Malvern.
- Rothstadt, Margarita Charlotte, M.B., B.S., 1926 (Univ. Melbourne), 21, Epping Street, East Malvern.
- Sayle, Thomas Osler, M.B., B.S., 1926 (Univ. Melbourne), 49, Victoria Street, Sandringham.
- Skinner, Robert Ernest Ralph, M.B., B.S., 1926 (Univ. Melbourne), "Denver," Glenbrook Avenue, East Malvern.

- Slater, Jean Goodair, M.B., B.S., 1926 (Univ. Melbourne), 31, Hawdon Street, Heidelberg.
- Sleeman, James Mitchell, M.B., B.S., 1926 (Univ. Melbourne), "Yarallah," Portland.
- Smith, Julian Ormond, M.B., B.S., 1926 (Univ. Melbourne), 36, Powell Street, East Melbourne.
- Strange, Gwendoline Olive, M.B., B.S., 1926 (Univ. Melbourne), Wheatshaf Road, Glenroy.
- Sutherland, Stafford Fraser, M.B., B.S., 1926 (Univ. Melbourne), 13, Kintore Street, Camberwell.
- Swain, Alex. Benjamin, M.B., B.S., 1926 (Univ. Melbourne), Gilbert Road, Preston West.
- Syme, George Robin Adlington, M.B., B.S., 1926 (Univ. Melbourne), "Chesterfield," Mayfield Avenue, Malvern.
- Tyrer, Thomas Longton, M.B., B.S., 1926 (Univ. Melbourne), Deniliquin, New South Wales.
- Varley, Edward Cliffore, M.B., B.S., 1926 (Univ. Melbourne), 36, The Avenue, East Caulfield.
- Wallace, Arnout Alexander, M.B., B.S., 1926 (Univ. Melbourne), Narracoorte, South Australia.
- Webster, Allan Bickford, M.B., B.S., 1926 (Univ. Melbourne), 7, Hartwood Street, East Kew.
- Westacott, Leslie John, M.B., B.S., 1926 (Univ. Melbourne), Hamilton.
- White, Newport Benjamin, M.B., B.S., 1926 (Univ. Melbourne), Holy Trinity, East Melbourne.
- Zacharin, David, M.B., B.S., 1926 (Univ. Melbourne), 5, Longmore Street, St. Kilda.

#### For Additional Registration.

- Mackay, Eric Eccles, M.D., 1922 (Univ. Melbourne), F.R.C.S., 1925 (England).
- Searby, Clifford Henry Coomer, F.R.C.S., 1925 (England).
- Shaw, John Holmes, D.L.O., 1925 (England), F.R.C.S., 1925 (Edinburgh).

#### THE MEDICAL DIRECTORY.

CIRCULARS containing forms to be filled in for the compilation of the Medical Directory have been addressed to every medical practitioner in Australasia. Those who did not reply to the first invitation, received a second circular. There are still many who have not entered the details required on the forms and returned them to The Printing House, Seamer Street, Glebe, New South Wales. The form has been reproduced in this issue and will be found in the Advertiser. Members who have not already sent in their forms, are earnestly requested to tear out the page, to fill in the necessary details and to transmit it to this address as soon as possible.

#### Books Received.

- THE PRINCIPLES AND PRACTICE OF ENDOCRINE MEDICINE, by William Nathaniel Berkeley, Ph.D., M.D.; 1926. Philadelphia: Lea and Febiger; Sydney: Angus and Robertson, Limited. Royal 8vo., pp. 368, with illustrations. Price: 22s. 6d. net.
- COLLECTED PAPERS BY THE STAFF OF THE HENRY FORD HOSPITAL (FIRST SERIES, 1915-1925); 1926. New York: Paul B. Hoeber Incorporated. Royal 8vo., pp. 634, with illustrations. Price: \$3.00 net.
- BULLETIN NO. IX OF THE INTERNATIONAL ASSOCIATION OF MEDICAL MUSEUMS AND JOURNAL OF TECHNICAL METHODS: SIR WILLIAM OSLER MEMORIAL NUMBER: APPRECIATIONS AND REMINISCENCES; 1926. Privately Issued at 836, University Street, Montreal, Canada. Royal 8vo., pp. 633, with illustrations.
- THE PHYSIOLOGY OF THE CONTINUITY OF LIFE, by D. Noël Paton, M.D., B.Sc., LL.D., F.R.S.; 1926. London: Macmillan and Company, Limited. Demy 8vo., pp. 236, with illustrations. Price: 12s. net.
- THE BEAUMONT FOUNDATION LECTURES. SUBJECT: THE THYROID GLAND, by Charles H. Mayo, M.D. and Henry W. Plummer, M.D.; Series Number Four; 1926. St. Louis: The C. V. Mosby Company. Post 8vo., pp. 83. \$1.75 net.
- NURSERY GUIDE FOR MOTHERS AND CHILDREN'S NURSES, by Louis W. Sauer, Ph.D., M.D.; Second Edition; 1926. St. Louis: The C. V. Mosby Company. Crown 8vo., pp. 206, with illustrations. Price: \$2.00 net.

**MODERN MEDICINE, ITS THEORY AND PRACTICE**, edited by Sir William Osier, Bart., M.D., F.R.S. Re-edited by Thomas McCrae, M.D., Assisted by Elmer H. Funk, M.D.; Volume III.: Diseases of Metabolism, Diseases of the Digestive System; 1926. Philadelphia: Lea and Febiger; Sydney: Angus and Robertson, Limited. Royal 8vo., pp. 1052, with illustrations. Price: 42s. net.

**THE PRACTICAL MEDICINE SERIES, COMPRISING EIGHT VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY: Under the General Editorial Charge of Charles L. Mix, A.M., M.D.; Volume VIII.: Nervous and Mental Diseases**, Edited by Peter Bassoe, M.D.; 1925. Chicago: The Year Book Publishers. Crown 8vo., pp. 374, with illustrations. Price: \$2.25 net.

**THE PRINCIPLES OF ANATOMIC ILLUSTRATION BEFORE VESALIUS: AN INQUIRY INTO THE RATIONALE OF ARTISTIC ANATOMY**, by Fielding H. Garrison, A.B., M.D.; 1926. New York: Paul B. Hoeber, Incorporated. Post 8vo., pp. 58, with illustrations. Price: \$2.50 net.

**A MANUAL OF NORMAL PHYSICAL SIGNS**, by Wyndham B. Blanton, B.A., M.A., M.D.; 1926. St. Louis: The C. V. Mosby Company. Post 8vo., pp. 215. Price: \$2.50 net.

**EPILEPSY: A FUNCTIONAL MENTAL ILLNESS: ITS TREATMENT**, by R. G. Rows, M.D. (London) and W. E. Bond, M.R.C.S. (England), L.R.C.P. (London); 1926. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 146. Price: 8s. net.

### Medical Appointments.

Dr. Clarence Oscar Ferrero Rieger (B.M.A.) and Dr. Donald McDonald Steele (B.M.A.) have been appointed Members of the Port Lincoln High School Council, South Australia.

Dr. Arthur Harrison Edward Watson (B.M.A.) has been appointed a Member of the Quorn High School Council, South Australia.

Dr. Robert McMahon Glynn (B.M.A.) has been appointed a Member of the Riverton High School Council, South Australia.

Dr. Harry Harper Formby (B.M.A.) has been appointed a member of the Strathalbyn High School Council, South Australia.

Dr. E. J. Howley (B.M.A.) has been appointed Medical Officer to attend sick aborigines in Ceduna and Denial Bay Districts, South Australia.

Dr. C. D. Kerr (B.M.A.) has been appointed Acting District Medical Officer and Public Vaccinator at Fremantle.

The following honorary appointments at the Public Hospital, Fremantle, have been made for a period of three years, from July 1, 1926: *Medical Officers*: Dr. W. E. Blackall (B.M.A.), Dr. A. H. Gibson (B.M.A.), Dr. C. D. Kerr (B.M.A.), Dr. E. C. East (B.M.A.), Dr. E. R. Dermer (B.M.A.), Dr. H. Field-Martell (B.M.A.). *Eye Specialist*: Dr. C. Morlet (B.M.A.). *Medical Officers for Venereal Diseases Clinic*: Dr. E. C. East (B.M.A.), Dr. C. D. Kerr (B.M.A.).

Dr. Henry John Taylor (B.M.A.) has been appointed Acting Government Medical Officer at Townsville, Acting Health Officer for the purposes of *The Health Acts 1900 to 1922*, and Acting Medical Officer to the State Children Department, Townsville, Queensland.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xx.

ROYAL NORTH SHORE HOSPITAL OF SYDNEY: Resident Medical Officer.

THE QUEEN'S (MATERNITY) HOME, ROSE PARK, SOUTH AUSTRALIA: Resident House Surgeon.

### Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital. Cook District Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

### Diary for the Month.

- AUG. 3.—Tasmanian Branch, B.M.A.: Council.  
AUG. 4.—Victorian Branch, B.M.A.: Branch.  
AUG. 4.—Western Australian Branch, B.M.A.: Council.  
AUG. 5.—South Australian Branch, B.M.A.: Council.  
AUG. 5.—Section of Orthopaedics, New South Wales Branch, B.M.A.  
AUG. 6.—Queensland Branch, B.M.A.: Branch.  
AUG. 10.—Tasmanian Branch, B.M.A.: Branch.  
AUG. 10.—New South Wales Branch, B.M.A.: Ethics Committee.  
AUG. 10.—Section of Medicine, New South Wales Branch, B.M.A.  
AUG. 12.—Victorian Branch, B.M.A.: Council.  
AUG. 12.—New South Wales Branch, B.M.A.: Clinical Meeting.  
AUG. 13.—Queensland Branch, B.M.A.: Council.  
AUG. 16.—New South Wales Branch, B.M.A.: Organization and Science Committee.  
AUG. 17.—Tasmanian Branch, B.M.A.: Council.  
AUG. 17.—New South Wales Branch, B.M.A.: Executive and Finance Committee.  
AUG. 18.—Western Australian Branch, B.M.A.: Branch.  
AUG. 18.—Central Northern Medical Association, New South Wales.

### Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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